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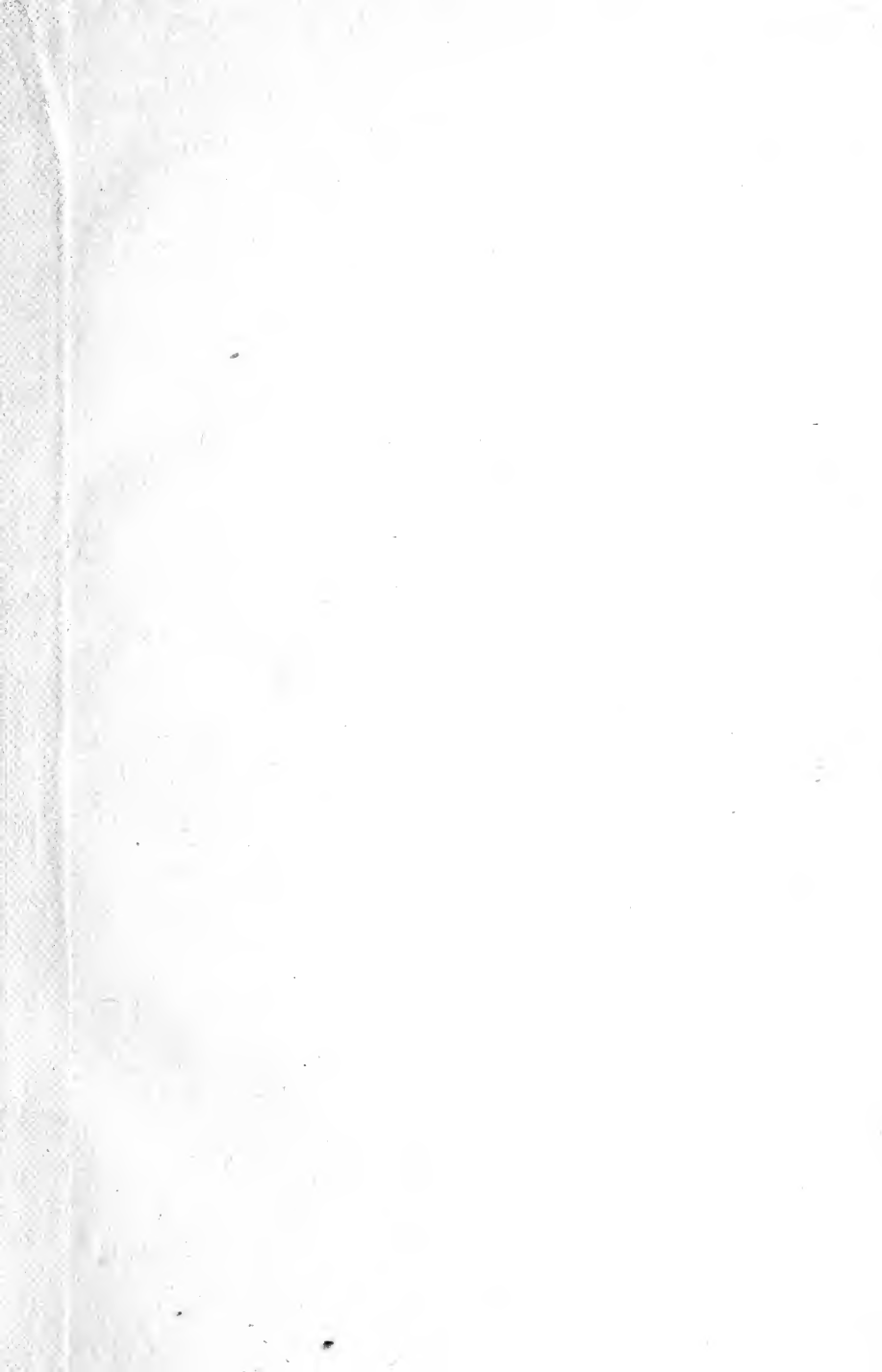
SAN PEDRO, LOS ANGELES AND SALT LAKE R.R.



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HINTS *to the* HUSBANDMAN

REGARDING OPPORTUNITIES
in
UTAH, NEVADA *and* CALIFORNIA



ALONG THE LINES
of the
SAN PEDRO
LOS ANGELES &
SALT LAKE R.R.





IT IS OFTEN SAID that from agriculture comes the only substantial basis for the building of any commonwealth. The object in issuing this book is to present a brief but accurate description, in words and illustrations, of the wonderful development and agricultural opportunities along the lines of the Salt Lake Route in Utah, Nevada and California. These states present to the settler and homeseeker hundreds of opportunities for the securing of farms and ranches, both great and small, either already producing or in such condition as to permit the owner to carry out every phase of modern development. It is a short story of the possibilities for home making for men of moderate means, who desire to carve out of the lands of this Great West a Garden of Eden, such as others have done, and thousands of others will do within the next few years.

Published by the Industrial Department of the San Pedro, Los Angeles and Salt Lake Railroad.

DOUGLAS WHITE
General Industrial Agent

PROF. L. A. MERRILL
Agricultural Expert

T. M. SLOAN
General Freight Agent

T. C. PECK
General Passenger Agent

H. C. NUTT, General Manager **F. A. WANN, General Traffic Mgr.**

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Utah's Fertile Valleys

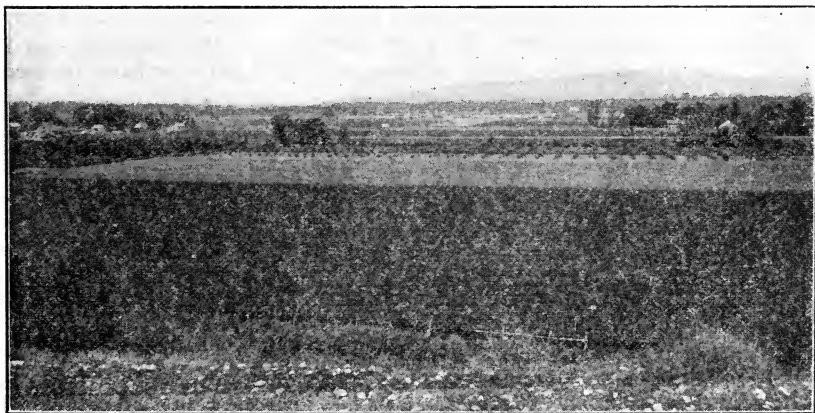
THE fact that Utah is rapidly coming into her own as one of the greatest agricultural states in the Union is apparent to everyone who has made even a cursory study of her conditions.

The advancement of the last few years along these lines has been phenomenal.

While Utah was the scene of the first irrigation work done upon this continent by Anglo-Saxons, her possibilities have only just begun to completely blossom. By means of expert engineering, modern and scientific construction, the proper conservation of water and compelling it to do its full duty to the soil, has increased the productive area of Utah by many thousands of acres since 1910. In fact, Utah possesses today several of the most perfectly constructed and carefully operated irrigation projects that have ever demanded the attention of the homeseeker.

In every one of the counties traversed by the lines of the Salt Lake Route Utah presents to the settler unlimited attractions in the way of possibilities for agricultural, horticultural or stock-raising development. From the homestead secured by the settler under the liberal laws of our Government, to the purchase of the highest grade lands located under the very latest system of water development and carrying perpetual water rights, from the lands to be devoted to the production of cereals under the dry farming process, to the lands producing the largest possible returns from either intensive farming or fruit-raising, throughout the entire range of possibilities Utah presents something which appeals to the pocket of every class of homeseeker or investor.

In addition to the alluring conditions of soil and water comes a climate unexcelled in any section of the temperate zone, where health is a commodity



A VISTA OF ONE OF UTAH'S FERTILE VALLEYS.

and the weather reports give an average in excess of 300 sunshiny days out of every year.

With all of these advantages, Utah's valleys are being rapidly filled with conservative, practical husbandmen, and yet there are within the limits of the state unlimited possibilities for the man who wishes to combine brain, brawn and a little capital for the development of a home.

Utah County and the Strawberry Valley Project

THE Strawberry Valley project, constructed by the U. S. Reclamation Service, will irrigate about 60,000 acres of land in the vicinity of Spanish Fork and Payson, on the southern shore of Utah Lake. The districts to be watered are about equally divided between mesa and bottom lands, varying in elevation from 4500 to 4800 feet; most of them are privately owned, the only government land being located northwest of Payson, and in the neighborhood of West Mountain. The project's water supply comes from the Strawberry and Spanish Fork Rivers; that from the Strawberry River will be stored in Strawberry Valley, in a reservoir whose capacity is 280,000 acre-feet. The reservoir, surrounded by high mountains, stands at an elevation of 7,500 feet. A tunnel 19,900 feet long, lined with concrete and with a capacity of 600 second feet, conducts the flow through the rim of the great basin into Sixth Water Creek, thence via Diamond Creek and Spanish Fork River to the diversion dam near the mouth of Spanish Fork Canyon. At that point a power plant has been erected; besides supplying electricity for use in constructing the project, it furnishes light for the towns of Payson, Salem and Spanish Fork, and will be put to further use in pumping irrigation water. Any surplus water from the project may be employed to advantage in the Juab Valley.

The districts comprehended by the Strawberry Valley project will produce apples, peaches, pears, apricots, cherries, plums, berries, all kinds of vegetables, hay and grain; in short, they will compare favorably with the best Utah Valley land already under cultivation. With the completion of the project, privately owned lands offered six or seven years ago at \$15.00 per acre have assumed values of \$100.00 per acre and upwards.

The celebrated Utah Valley, one of the most beautiful as well as one of the most fertile valleys in the West, is about 30 miles long and 15 miles broad; it is limited on the east by the rugged and imposing Wasatch Mountains, and on the west by the Tintic Range. Lehi, American Fork, Pleasant Grove, Provo, Springville, Spanish Fork, Payson and Santaquin are the chief towns. These fortunate communities, flourishing amidst charming pastoral scenes, are surrounded by fruit and farm lands of marvelous richness. The bench lands are the fruit districts and the bottom lands are given to growing grain, alfalfa, potatoes and sugar beets. When the orchard mesas along the foot of the Wasatch from Lehi to Santaquin, a distance of 60 miles, are wholly devoted to fruit growing, they will constitute one of the most remarkable horticultural regions in the world.

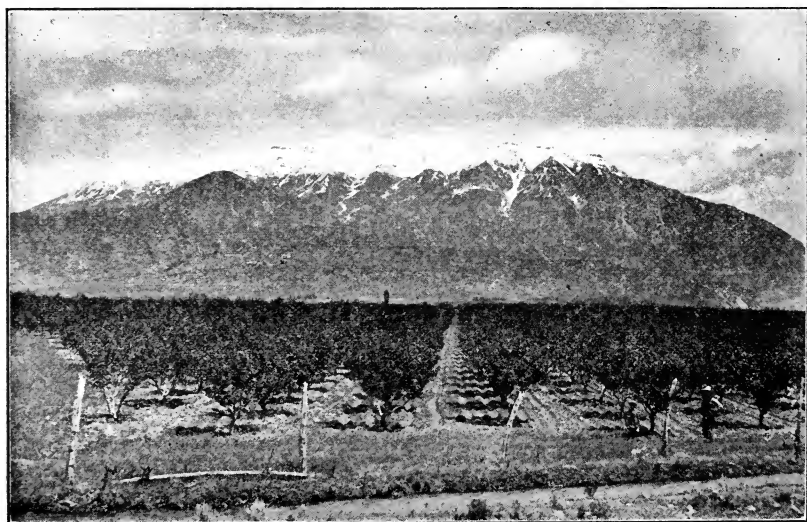


WHERE FRUITS AND GRAIN COMMINGLE, UTAH VALLEY.
A YOUNG ORCHARD, UTAH VALLEY.
ALFALFA FIELD, UTAH VALLEY.

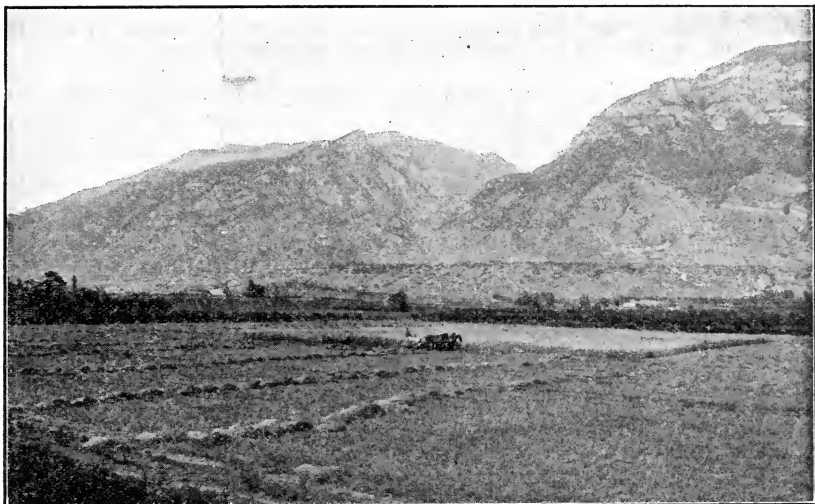
Occupying some 93,000 acres of the floor of the valley are the waters of Utah Lake; upon its shores stand a number of pumping plants, which will supply water to the bench lands not included in the various projects.

The lands adjacent to Provo, the central shipping point of the valley, may be considered typical. Mile after mile of orchards greet the eye and from that district alone 1500 carloads of fine fruit are shipped annually. The mean temperature is 49.3° , the average annual precipitation is 13.71 inches, the elevation 4532 feet. Peaches, planted 135 trees to the acre, yield 8 to 10 cases per tree; cherries, planted 80 to 100 trees per acre, yield up to \$8.00 per tree. Dewberries yield 400 cases per acre; strawberries, 400 to 600 double cases; sugar beets, 14 to 28 tons. Dry-farm wheat measures per acre 25 to 45 bushels; irrigated wheat, 50 to 60 bushels; oats, 80 to 120 bushels; barley, 70 to 80 bushels. Spanish Fork holds the world's record for the production of barley per acre. Three crops of alfalfa are grown annually, yielding 6 to 8 tons of hay per acre. The Elberta is considered the best commercial peach; among the apples grown profitably are the Jonathan, Rome Beauty, Ben Davis, Gano, Spitzenburg, and Winesap. In addition to the fruits mentioned, apricots, plums, pears and prunes, together with raspberries, yield prolifically. Potatoes produce three, four and five hundred bushels per acre; onions bring six to seven hundred dollars. Provo and its immediate vicinity has not had a fruit crop failure for 35 years.

The growing of sugar beets is made attractive by the presence in the valley of two great sugar factories. The Payson plant has a capacity of 500 tons per day, and the plant at Lehi a capacity of about 1100 tons per day. In 1913 the Lehi plant manufactured 26,000,000 pounds of refined sugar.



FRUIT ORCHARD AT BASE OF MT. TIMPANOGOS, UTAH VALLEY.



WHEAT FIELD IN UTAH VALLEY.

Dairying, stock raising, poultry husbandry, beekeeping and kindred pursuits thrive. Available figures credit Utah County with over 38,000 horses and cattle and more than 106,000 sheep. The Knight Woolen Mills at Provo, the largest in the State, have an annual consumption of over a million pounds of wool, all purchased in home markets. Portions of the Wasatch and Uintah National Forest Reserves lies within the county, containing together timber valued at \$4,378,500.00. Lodge pole pine and Englemann spruce are the predominating growths. These vast areas are open to grazing upon payment of small fees.

In addition to the great government project mentioned there are a number of lesser enterprises reclaiming fertile acres.

The Moside Fruit Lands Co. holds some 9,500 acres of "bench" lands on the southwest shore of Utah Lake. This acreage is eminently fitted for growing fruit, grain, sugar beets and alfalfa. The soil is a rich loam, varying from a sandy to a clayey character, and covered by a healthy growth of sagebrush. A pumping plant has been installed, canals and laterals completed, and much land has already been planted with fruit trees, alfalfa and cereals.

The Elberta project, owned by the Utah Lake Land, Water and Power Co., is developing 15,000 acres near the southern end of Utah Lake. The reservoir holds 29,000 acre-feet of water. The lands are located on a high, sloping plateau; the soil, with a minimum depth of 15 feet, contains all the ingredients requisite for successful production. Quinces, cherries, apricots, pears and apples thrive. The lands are sold on easy terms and the settler is favored by every natural advantage.

The Provo Reservoir Co. irrigates some 10,000 acres in the northern part of the county and has land, with water right, in the market at \$75.00 per acre.

The Utah Irrigation Co. has water sufficient for about 20,000 acres; it is secured by pumping, from Utah Lake. This company, in addition to selling water, will exchange water for land.

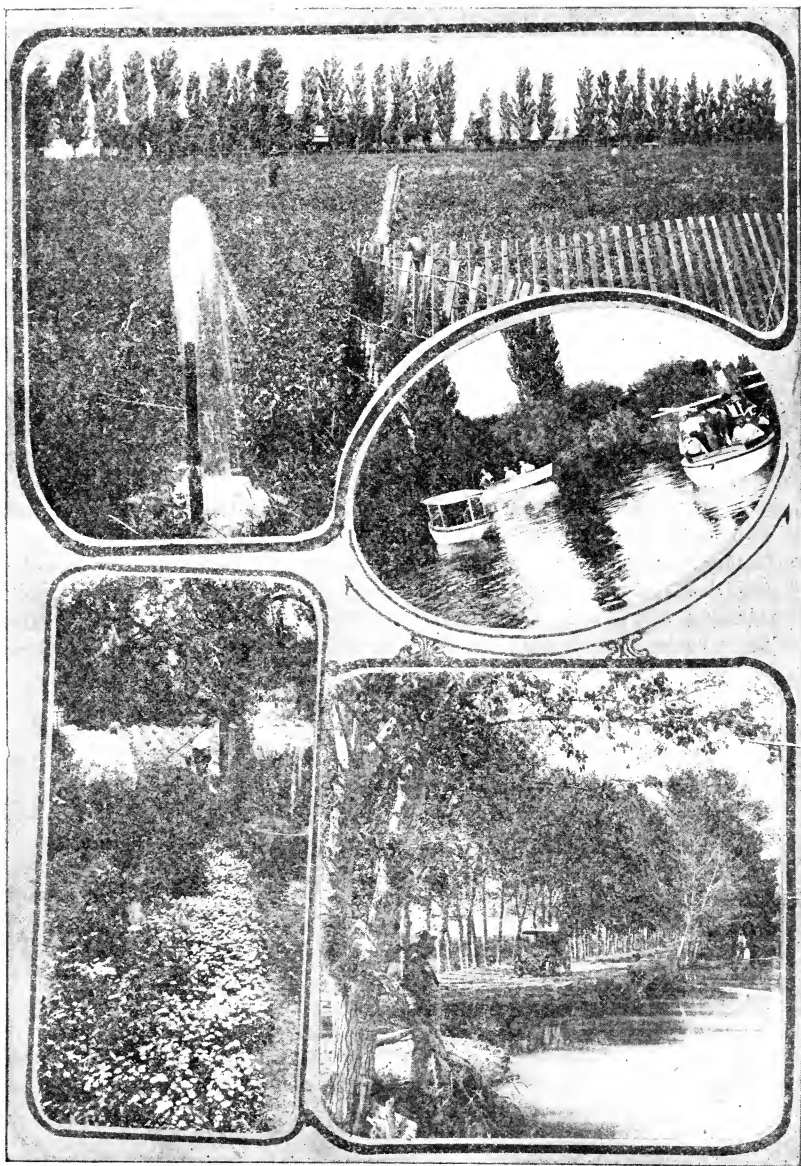
Many flowing wells are in use throughout the county and in most of the valleys they may be developed at an approximate cost of \$100.00. In 1912 there were 453,561 acres of unappropriated public lands, of which 110,689 were surveyed. The Salt Lake Route reaches the principal towns, connecting them with the markets to the north and the south.

Tooele County

TOOELE COUNTY, the second largest in the State, has not been developed extensively in an agricultural way, owing to lack of water. Nevertheless, the fertile valleys of the eastern portion support some of the most productive farms in the West. Around Grantsville and Tooele, the chief towns, fruit, alfalfa, potatoes and grain do well. At Tooele, the average annual precipitation is 16.2 inches; elevation, about 4,900 feet; mean temperature 50.2°. From the car window of Salt Lake Route trains a number of thriving dry-farms may be seen in Tooele and Rush Valleys. Tooele Valley was formerly an arm of Lake Bonneville, and the wave action on the alluvial slopes of the Oquirrh Mountains has contributed to the soil formation; Rush Valley supports a healthy growth of sage and rabbit brush, and the soil is of ample depth to insure profitable dry-farming. Tooele County had, in 1912, 3,655,282 acres of unappropriated public lands, of which 1,252,653 acres were surveyed.

A State experiment station is maintained at a point 10 miles west of Tooele, and 14 miles south of Grantsville. The soil is a sandy loam uniform with depth, containing a high percentage of phosphorus and an abundance of limestone; records at the farm for eight years show an average annual precipitation of 13.75 inches. A number of fall wheats, Gold Coin, Kofod, Red Chaff, Lofthouse and Turkey, have produced yields of between 27 and 28 bushels per acre without irrigation. Both barley and rye have given good results; as a feed for horses, dairy cows, hogs and poultry, barley more nearly resembles corn than any of the well-known cereals; it is especially recommended in combination with alfalfa. Properly ground rye also forms satisfactory feed for all classes of domestic animals. Emmer, a good stock feed, very hardy and drought-resistant, has proven profitable near Tooele City. In the spring of 1912, 30,574 fruit trees, principally apple, were planted in the orchards of Tooele County. On the dry farms in this region the value of summer fallowing is marked.

Notwithstanding the absence of large lakes and streams which might be used for that purpose, there were about 13,000 acres of irrigated lands in 1909. There are 106 flowing wells in the valleys, and many springs.



ALFALFA FIELD AND FLOWING WELL.
IN A UTAH GARDEN.

BOATING ON UTAH LAKE.
UTAH IRRIGATION DITCH

In 1912, 202,817 sheep were assessed in Tooele County. There are vast ranges, and, in addition, the Wasatch National Forest, partly within the county, is open to a limited number of sheep and cattle provided their board be paid. In 1911, 9,570 cattle and 15,576 sheep and goats grazed in the Wasatch Reserves. Among applicants for these government privileges the small, near-by stockgrower is given preference.

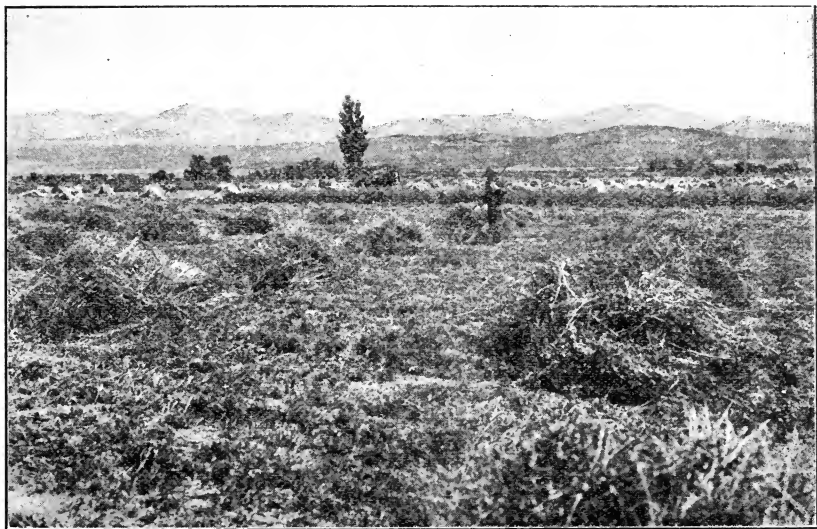
The Salt Lake Route crosses the eastern section of the county, traversing agricultural valleys where the cultivated area is growing rapidly. The increase in dry-farming is adding to the commercial stability of the region, and its mines and stock ranges continue to pour in their tribute. The scarcity of cheap farm lands throughout the United States makes Tooele County an attractive field for investigation.

Juab County

SOME twenty-eight years ago a citizen of Nephi, Juab County, testified before the government authorities that he could raise wheat on the Levan Ridge without water. He was immediately indicted for perjury. For two years he cultivated his land under bonds; eventually he was able to prove his ability to raise not only wheat, barley, rye and oats, but also large crops of delicious peaches. This was accomplished by early dry-farming methods, in a region whose average rainfall during a period of 39 years has been 17.15 inches per annum. The initiative of men of similar determination has covered the Levan Ridge with flourishing fields of grain and sugar beets, and has enriched its slopes with rows of apple and peach trees.



WHEAT BETWEEN THE TREES IN A YOUNG ORCHARD, UTAH VALLEY.



HARVESTING UTAH ALFALFA.

A State Experiment Station is maintained five miles south of Nephi; investigations conducted there have established the facts that wheat will yield 38 bushels per acre, and oats 50 bushels per acre, upon dry-farm land. Good results from corn have been reported, and farmers on arid lands have come to believe that where anything will grow, rye can be made to succeed. In the production of alfalfa seed, a remunerative dry-farm crop, best results have been secured by planting the alfalfa in rows or even in hills, and intertilling. Successful dry-farm operators at Nephi estimate the average cost of growing wheat on summer fallowed land to be \$6.85 per acre; this includes all charges except interest charges for the land. With wheat selling at 75 cents per bushel, this means that 9 bushels per acre will defray expenses. The vicinity of Nephi is rapidly becoming celebrated for its fruit and berries, which attain large size and excellent flavor.

The soil of the Juab Valley is derived from the weathering of the Mount Nebo Range and the San Pitch Mountains, which guard it on the east; limestone and gypsum enters largely into the composition of these mountain masses, and consequently into that of the soil; the latter is a clay loam, free from gravel, and of excellent character for the retention of moisture. The phosphorus content is high, the percentage of nitrogen larger than that of other soils in the State, and there is sufficient potassium, provided the farmer cultivates the land so as to render the plant food available.

Statistics show about 15,000 acres of irrigated lands in Juab County. Most of this is included in projects conducted as co-operative enterprises, and the water comes largely from streams by gravity. There is a growing acreage supplied by springs and flowing wells.

Nephi, the county seat and the center of the agricultural portion of Juab County, is a prosperous town of 3,000 inhabitants, on the Salt Lake Route. Its resources are not limited to farming; there are salt mines, stone quarries and great deposits of rock gypsum. The gypsum, which occurs in beds together with rock salt, has given rise to a large industry, the manufacture of wall plaster and plaster of paris.

The raising of sheep and cattle is also an important source of wealth; statistics for 1910 gave the county 11,206 cattle, and the number of sheep assessed in 1912 was 107,310.

Westward from the agricultural valleys rise the gray ridges of the Tintic Mountains, whose tunneled slopes have yielded one-third of the vast mineral wealth of Utah.

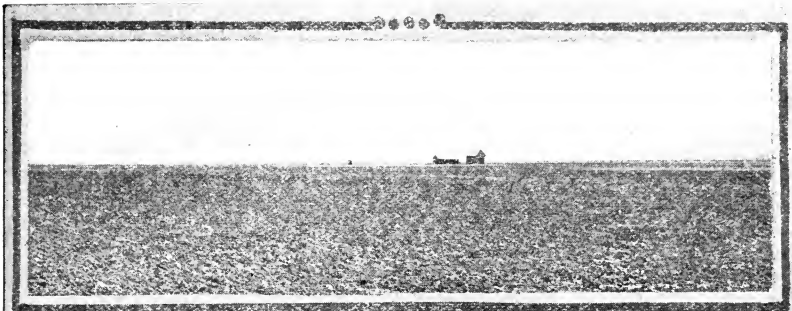
With an area of 2,145,120 acres, Juab County had, in 1912, 1,764,611 acres of unappropriated public lands, of which 613,987 acres were surveyed. The Nebo National Forest Reserve, containing timber valued at \$184,000.00, occupies a large portion of her eastern frontier. The Salt Lake Route crosses the county with two lines, one traversing the agricultural district, through Nephi, the other bisecting the Tintic Valley, and sending branches to the great mining camps. The resources of the county are remarkably diversified; the fields of oil known to exist should soon contribute their quota of wealth, and dry-farming, from its stronghold on Levan Ridge, is steadily pushing westward. From the car window, at Tintic and McIntyre, on the Salt Lake Route, one may now see fine stands of wheat that have never known irrigation.

Millard County—The Delta Project

CONTRAST has a universal appeal, and for this reason the observer familiar with the Delta region of several years ago, more than the newcomer, is impressed by its recent transformation. Those who remember when sage brush, greasewood and shadscale were the ruling triumvirate in the broad Pahvant Valley, marvel most at the termination of their reign. Orderly fields of alfalfa and grain have supplanted the riot of useless vegetation, and the monotony of the level stretches is broken by comfortable farm houses. The Delta Land and Water Company has brought about this change. The project, though young in years, is no longer an experiment; its future is assured.

The land, which was reclaimed under the Carey Act, lies in two tracts, 134 miles south of Salt Lake City, on the main line of the Salt Lake Route. Forty thousand acres are comprehended by the project, and a million dollars have been expended in perfecting the irrigation system. The waters of the Sevier River are checked by a great dam, and directed through concrete lined canals by diversion works of enduring rock and steel. The land company exercises an almost paternal care over the settlers; its terms and requirements are judiciously tempered to the means of men of small capital.

The soil of the valley varies considerably; the dominant type is a clay loam, mixed and underlaid with sand and clay. Analyses of soils from dif-



LAND PLOWED FOR FIRST SEEDING, DELTA.
HARVEST OF FIRST CROP, DELTA.

DELTA'S STRAW STACKS.

UTAH CORN.

The uncleared land supports a luxuriant growth of black sagebrush, greasewood and shadscale. The soil varies from sandy to clayey, with all the intermediate stages of sandy loam and clay loam. Analyses show that the percentage of phosphoric acid is normal, the potash content higher than the average, and that lime is present in abundance. Plants are enabled to use other plant food to better advantage when lime is present in generous quantities. In parts, the Lynndyl tract has an uneven contour, and underlying all of it is a layer of coarse sand which forms an ideal natural drainage system.

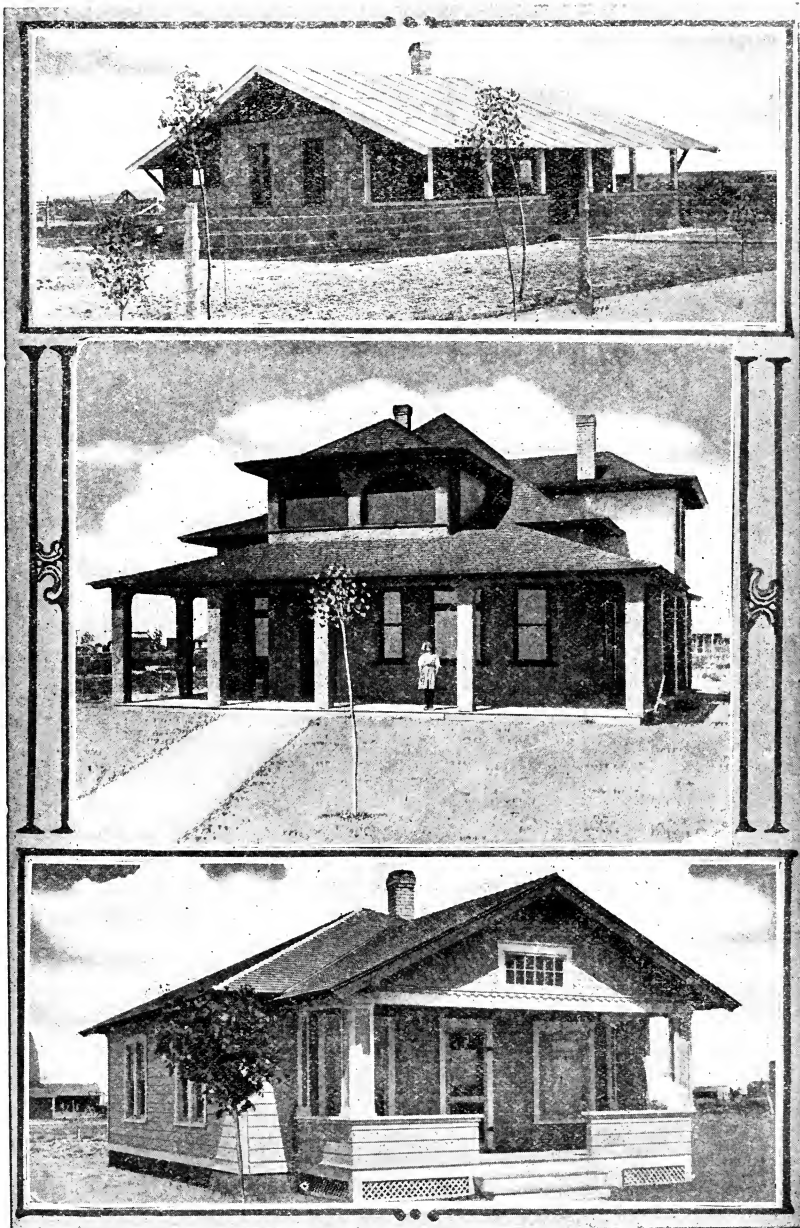
Irrigation water is secured from the Sevier River, the company holding ample rights to guarantee purchasers of land two acre-feet per annum. The reservoirs, diversion dams, canals and laterals have been constructed with permanency always in view. The mean temperature at Oak City is 50.7 degrees, the average annual precipitation is 15.15 inches, the elevation 4,900 feet. Excellent water for domestic use may be obtained at depths of from 100 to 225 feet; it rises in the wells to 85 feet below the surface.

Much of the land will lend itself admirably to fruit growing, and practically all of it is suitable for raising large crops of cereals, alfalfa, sugar beets and general farm products. Experts recommend alfalfa and livestock as a particularly remunerative combination. The company maintains a demonstration farm for the instruction and benefit of the farmers. Land, with perpetual water right, sells for \$65.00 per acre, payable in annual installments within a period of ten years.

Some enviable records have been established by farmers on the older cultivated lands in the vicinity. Near Oak City, wheat has yielded 58 bushels per acre, oats and barley each 100 bushels, and potatoes 560 bushels per acre. Elberta and Crawford peaches, and pears, prunes and apples offer certain opportunities for large profits. An orchard planted to Elberta peaches in 1900 produced in 1907, 240 bushels from 75 trees. Jonathan, Winesap and Gano apples thrive, as do the hardier varieties of grapes, Muscat and Tokay. Alfalfa and alfalfa seed make lucrative crops. Dairying and hog and cattle raising are pursuits to which the successful farmer must give due attention.

For this region the market facilities are of the best. Salt Lake City lies 118 miles to the north, reached by two lines of the Salt Lake Route, and to the south are the markets of Southern California, always eager for Utah livestock. Low fares to Lynndyl have been established for homeseekers desiring to inspect the land.

Within the eastern borders of Millard County are portions of the Nebo and Fillmore National Forest Reserves, containing together some 394,000 M board feet of saw timber, valued at \$2.00 per M., 29,463 horses and cattle, and 47,766 sheep grazed on the reserves in 1912. In that year the county had 3,489,642 acres of unappropriated public lands, of which 1,170,027 were surveyed.



CHARACTERISTIC RANCH HOMES, DELTA PROJECT.

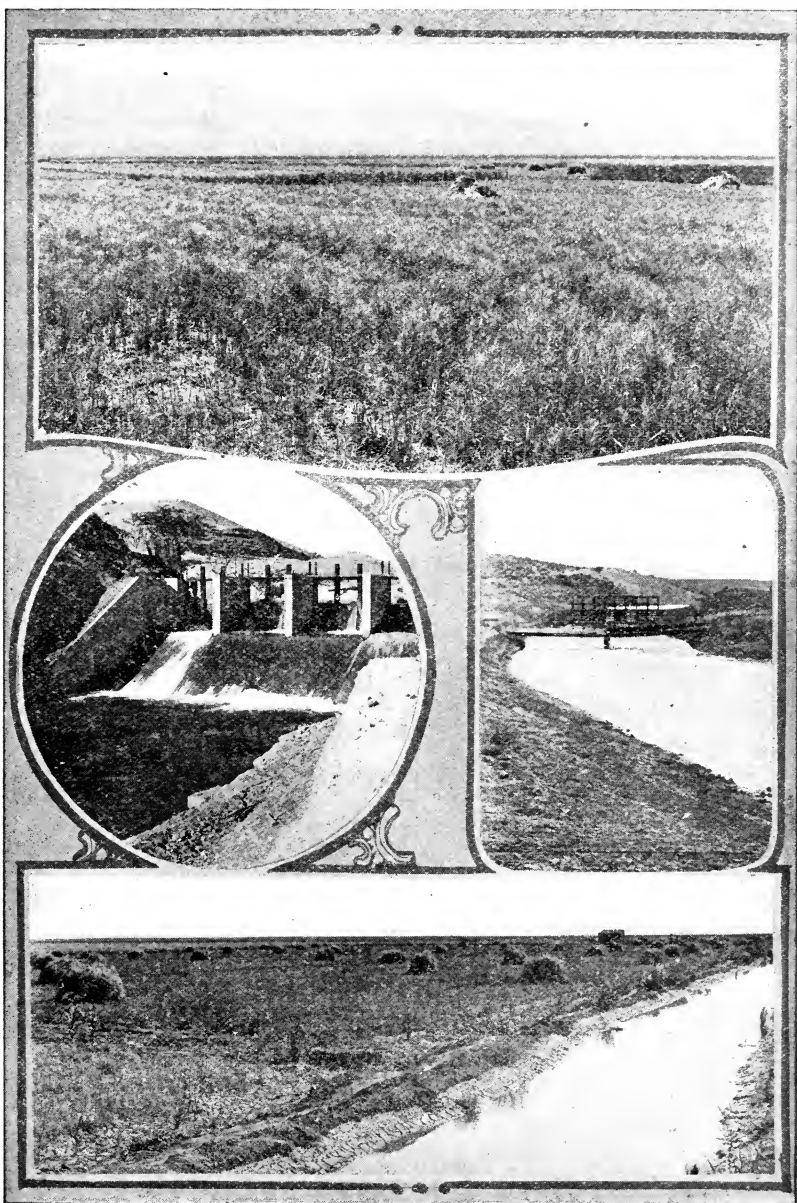
Beaver County and the Milford Valley Irrigated Lands

THE Milford Project is unique in that it will not tolerate non-success. The lands it comprehends are rich, and so, in the ordinary sense of the word, are the farmers it has attracted. A majority of the men who decide to settle there come prepared to build comfortable houses and barns; they have funds for improved agricultural implements, conveniences, even luxuries, and, beyond that, substantial bank accounts. They are men who have gotten wealth from the soil in other regions, whose eyes are quick to perceive opportunities; they have been drawn by the remarkable promise of the valley, and have given it the stamp of their approval. Like most good things, Milford Valley irrigated lands are limited in quantity; there are only 15,000 acres for disposal.

The lands lie one to ten miles from the progressive town of Milford; a gradual slope from the Mineral Mountains affords perfect drainage. The apparently level stretch of sage brush, match weed, greasewood and shadscale is rimmed by the sharp outlines of gray, blue and purple mountains which impart a charm to the valley that will eventually dot its surface with homes. The soil is decomposed limestone, forming a sandy loam for some three feet, and below that, a clay loam; the minimum depth is 15 feet. At Milford, the elevation is 4971 feet, the average annual precipitation is 8.31 inches, and the mean temperature, 49.6 degrees. The peculiar excellence of the Milford lands finds counterpart in few sections of the West, regions whose names are synonyms for bonanza farming.

With every irrigation system the most important feature is the dam; that which stores the waters of the Beaver River impresses one by its magnitude and assurance of permanence. Anchored by a concrete core, it rises 70 feet from the river bed; its base is 150 feet thick and its water slope is faced with heavy rock. The storage capacity of the reservoir is 27,000 acre-feet. Standing upon the crest of the huge barrier, one observes the lake it has created, stretching back into the canyon until its waters reach the edge of a thriving village, with stately poplars, green fields and pleasant homes. "When the reservoir is full," one asks, "what will become of the town of Adamsville?" "Adamsville," replies the land company, "will be at the bottom of the reservoir. We have bought the town, and most of the inhabitants will move to our tract, farther down the valley."

The lands to be cultivated are admirably suited for growing grain, alfalfa, sugar beets, potatoes, fruits and vegetables. Upon the company's eighty-acre tract, but ninety days from the brush, the following were observed in healthy stages of growth: potatoes, cabbage, onions, peas, beans, beets, turnips, lettuce, radishes, asparagus, carrots, cantaloupes, watermelons, wheat, corn, buckwheat, barley, rye, vetch (for fertilizer), blue and orchard grass, meadow fescue and white clover. Young pear, apple, cherry, peach, plum and apricot trees, as well as grape vines, had recently been planted and were progressing with all the optimism of youth. To see these plants and fruit trees tested by time, one has only to visit the adjacent farms, many of which have been cultivated for



DELTA LAND BEARING ITS FIRST WHEAT CROP.
SPILLWAY AND IRRIGATING DITCH, DELTA PROJECT.
AFTER THE HARVEST, MILLARD COUNTY.

more than thirty years. On the farm of Mr. Steven Hollingshead at Minersville stands an orchard that speaks, or, rather, groans, for itself. Blue damson plums and Ben Davis apples drag their supporting branches earthward; one fine tree of Bartlett pears, whose yield was estimated at 15 bushels, was loaded with half ripe fruit of uniform size and development. The apricot trees, bending beneath their yellow treasures, bore fruit as large as lemons; four scarcely ripe apricots weighed exactly one pound. Spring wheat was seen, yielding 60 bushels per acre, weighing 90 pounds per bushel; and oats yielding 92 bushels per acre, weighing 55 pounds per bushel.

A visit to the Davis farm displayed further wonders. Standing in the orchard beneath a tree of blue damson plums whose fruit hung like clusters of large grapes, a man from California vented his skepticism: "I reckon it took you some time to glue all the plums in your orchard on that one tree." His remark seemed warranted, for the profusion of fruit was almost incredible. In addition to these, there flourished crab apples, apricots, golden plums, walnuts, Kingston and wine grapes and cherries. Underneath the generous fruit trees grew strawberries, black and red raspberries and gooseberries. The sun, brightening the green and red burdens of the fine old apple trees, prepared one for believing the assertion of the farmer. "A photograph of Milford Valley land," he said, "when shown to an ordinary apple tree, will make it bear seven fold."

The excellent fields of wheat, potatoes and alfalfa, through which the traveler may pass for miles, are remarkable for their uniformity. Coming to a beautiful stand of alfalfa, the California declared: "I'll take off my hat to that field." As the party sped along, it was noticed that he kept his hat off, for the succeeding tracts were no whit inferior. Presently, however, there



TESTING THE SOIL NEAR MILFORD, BEAVER COUNTY.



A CLUSTER OF UTAH PLUMS, GROWN IN BEAVER COUNTY.

appeared a patch perhaps a little higher, and as level as the top of a table. The Californian said, simply: "That lucerne is growing fit to bust itself." Three crops a year, bringing 7 tons per acre, is the average alfalfa yield; near Minersville, there is one thriving field that has not been reseeded for 25 years. The record yield per acre, of potatoes, is 800 bushels; of onions, 1,000 bushels; of sugar beets, 35 tons.



FIELD OF PRIZE POTATOES, BEAVER COUNTY

For dairying and for fattening stock, there is no more favorable region in the West; feed, climate and sunshine are there. Poultry husbandry and hog raising vie as money making pursuits. Beaver County ranks first in the State in the number of its sheep; 235,000 were assessed in 1912.

Water, ninety-eight per cent pure, is obtained in Milford Valley, at depths of from 50 to 75 feet. According to the geological survey, there is a great artesian basin in Beaver Valley.

Milford Valley lands are selling for \$30.00 per acre, with \$70.00 per acre for perpetual water right; the payments for water may be made within twelve years.

East of Milford Valley, on Indian Creek, lies the Manderfield Project, which will reclaim about 10,000 acres. There are a number of dams in Indian Creek Canyon, irrigating small but fertile sections of the valley.

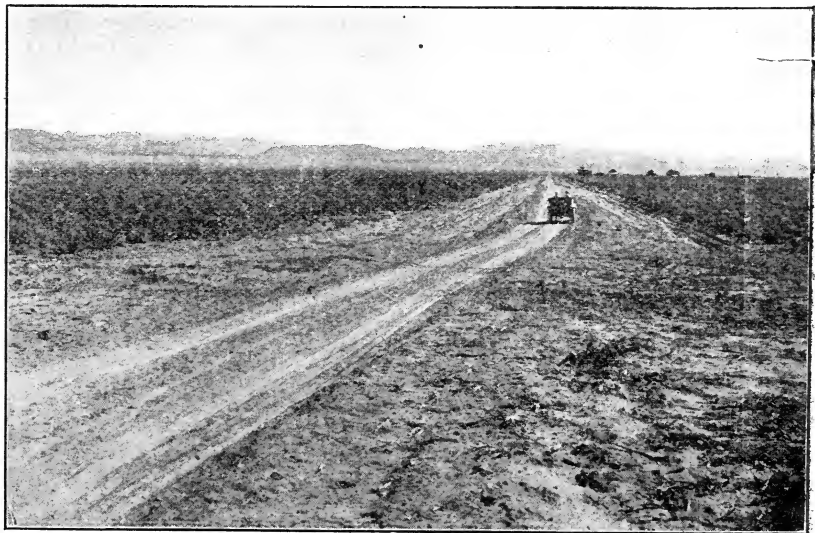
In 1912 Beaver County had 1,366,657 acres of unappropriated public lands, of which 297,335 were surveyed. Dry-farming has become firmly established and much of the homestead land may be successfully cultivated by that method. The Salt Lake Route crosses the county, sending a branch from the chief shipping point, Milford, to the mining towns of Frisco and Newhouse; Beaver is reached by automobile stage from Milford. Beaver County, with an established commercial rank, is contributing more than her share to the progress of Utah.



Iron County and the Newcastle Project

LIKE a lovely woman, the Escalante Valley needs but to be seen to be admired. Even the prospective settler, whose attention is centered on climate, water and soil, will have his instinct for the beautiful aroused by the panorama there unfolded. A broad, gently sloping plain, once the bottom of Lake Bonneville, stretches away to purple mountains; those pleasant patches of green on the smooth floor of the valley are fields of grain and alfalfa. A merely casual inspection will convince the observer of the fertility of the soil. In that region the Newcastle Land Company is making possible the development of prosperous farms.

The irrigable land, consisting of some 24,000 acres, with an additional 6,000 acres of dry-farm land, lies at an elevation of 5,000 feet and has an average slope of 12 feet per mile, making irrigation and drainage matters of extreme simplicity. The average annual precipitation is 16 inches and there is an abundance of subterranean water within easy pumping distance. In the vicinity of Enterprise water is obtained at from 40 to 75 feet, and on the Newcastle tract even nearer the surface. Analyses of well water from Lund, Beryl and Nada, on the Salt Lake Route, show that it will serve admirably for irrigation purposes. The Newcastle Company secures its gravity water by impounding the flow of several canyon streams; the reservoir is located in the Pine Valley Mountains at an altitude of of 7,000 feet. The dam joins two steep walls of basalt in a narrow gorge; its construction, as well as that of the headgates, canals and laterals, is of substantial and enduring character. When the proposed alterations are completed the reservoir will store 27,000 acre-feet of water.

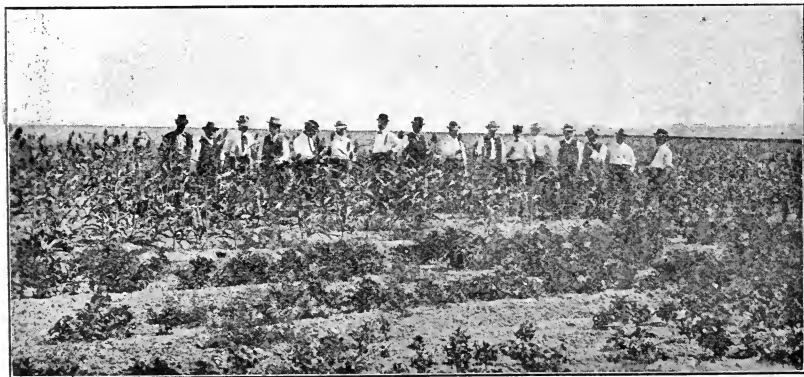


VISTA OF NEWCASTLE LANDS.

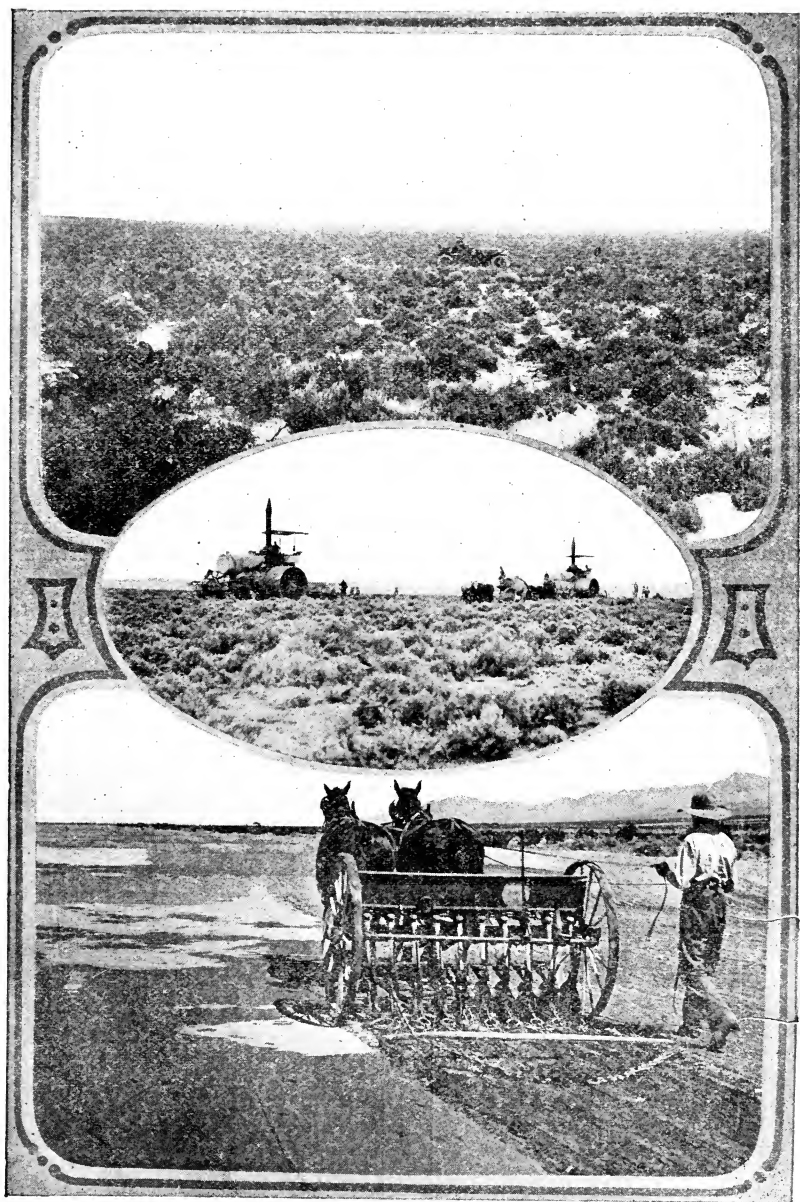
The lands awaiting tillage at Newcastle fall into three classes: those irrigable by gravity water, those that depend on pumped water, and the arid lands. The soil is alluvial, formed by the disintegration of granite, limestone and volcanic rocks; ranging from a sandy loam to a clay loam, it is rich in potash and carries considerable organic matter. There is good depth, varying to 50 feet and more, and uniform in richness. The predominating natural growth is a high and sturdy sagebrush, frequently attaining the height of a man. In soil and climatic conditions this region closely resembles the celebrated Cache Valley, one of the richest farming districts in the entire West.

A wide variety of crops is grown at Newcastle, and this statement applies to Iron County as a whole. The staples are wheat, rye, oats, barley, alfalfa, corn, beans and potatoes. Corn, on the arid lands (without irrigation) yields 40 to 60 bushels per acre; wheat, 20 bushels; rye 24 bushels; oats, 50 bushels; potatoes, 200 bushels; alfalfa, 5 tons per acre; all these yields increase marvelously with judicious irrigation. There are a few settlers on the tract, but no available statistics of their crop production. Sugar beets do extremely well. Much of the land recommends itself to horticulture, particularly to the production of apples, pears, plums and berries.

If the Garden of Eden contained all manner of good things, the three-acre tract at Newcastle is no distant rival. Under the guiding hand of the enthusiastic head gardener, Mr. Noble, a region dubbed "desert" by the early pioneers grows a list of food plants that would furnish a fair foundation for a vegetarian dictionary: beans, beets, cabbage, cantaloupes, carrots, cauliflower, corn (sweet and field), cucumbers, lettuce, onions, peas, potatoes, radishes, spinach, squash, tomatoes, turnips and watermelons. The company also maintains a farm of several hundred acres which it operates both for profit and example. There it demonstrates the wisdom of recognizing one's relatives; the kinship between dairying, hog raising and agriculture is one no farmer should ignore.



FIRST CROP AT SALT LAKE ROUTE EXPERIMENTAL FARM, MALONE MILLARD COUNTY.



THE LAND AS THE SETTLER FINDS IT.
BREAKING THE LAND WITH TRACTION ENGINE.
DRILLING IN THE FIRST CROP.

The land company has erected a modern concrete hotel for the comfort of those who come to inspect the land. Beryl, the shipping point for Newcastle, is 15 miles distant, on the Salt Lake Route; the railroad company has established low fares for homeseekers to that station. The location of these lands on a transcontinental railway system will prove an important factor in their development. State experiment stations are situated at Cedar City and Enterprise. Newcastle farm lands, with perpetual water right, are selling for an average price of \$60.00 per acre. Lands irrigable by pumping, and dry-farm lands, are much cheaper.

Turning from specific locality to the county as a whole, the possibilities broaden. Iron County had in 1912 1,192,288 acres of unappropriated public lands, of which 347.107 were surveyed. The Sevier National Forest, partly within the county, contains about 755,000 M board feet of saw timber.

In the number of sheep supported the county under observation ranks second in the State; as a summer range it remains unsurpassed. The pasturage area is enormous, although steadily decreasing as the farm acreage grows. The proximity of the Dixie National Forest, 700 square miles in extent, with a grazing fee for cattle of 25 cents per head, makes the raising of beef an attractive undertaking. There are about 10,000 cattle and 3,000 horses in Iron County. The importance of dairying and hog raising on every farm is occupying more and more attention; the expanding markets, both north and south, are increasing their demand for meat.

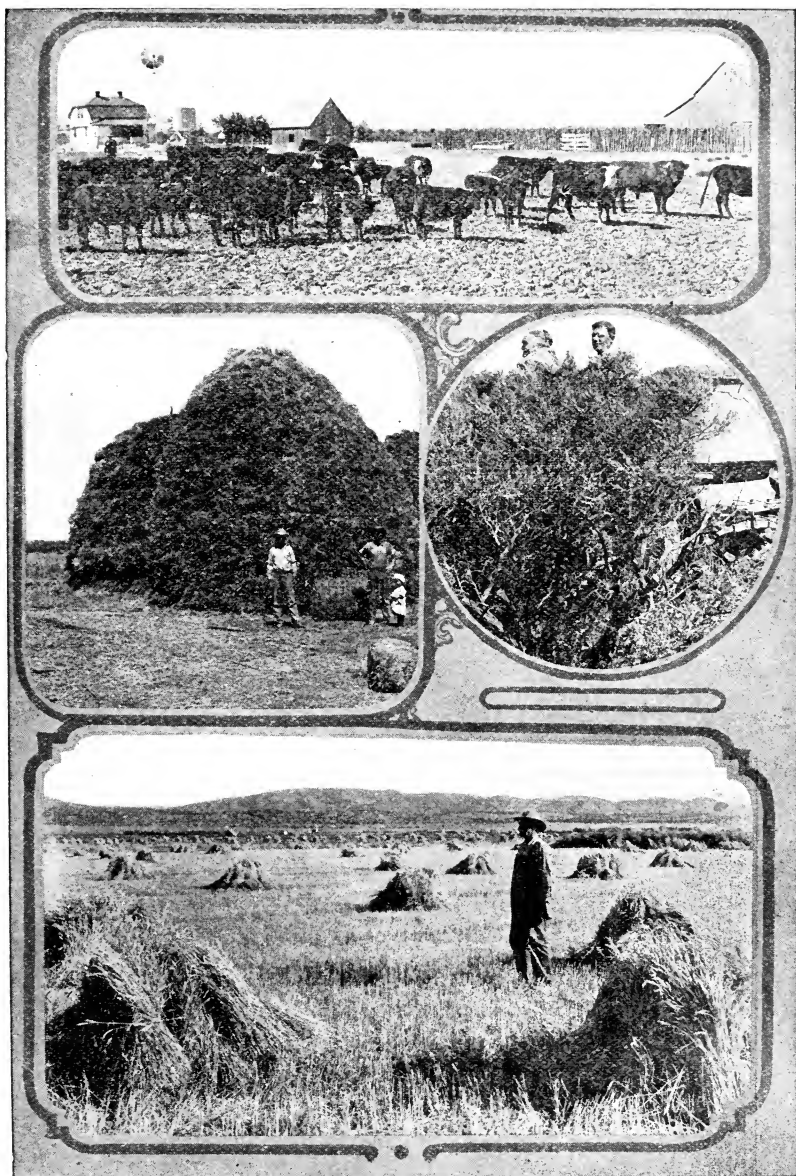
As the name indicates, there are vast deposits of iron; it is stated that the county contains enough iron to relay every mile of railway and to rebuild every steel structure in the United States. The ores belong to the hematite and magnetite classes; some of the iron-ore exposures stand out 200 feet above the surrounding country.



UTAH GIANT CURRANTS



CLUSTER OF UTAH PEARS



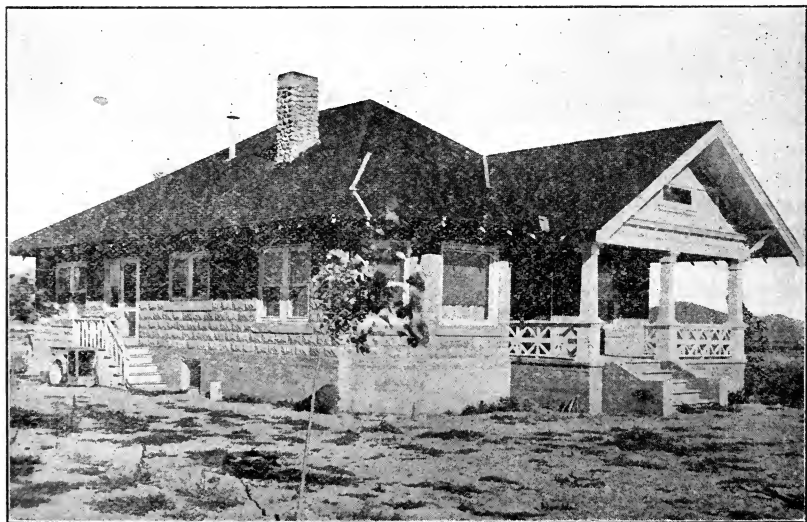
UTAH BRED CATTLE AT NEWCASTLE.
 NEWCASTLE WHEAT STACKS. THE GIANT SAGE, NEWCASTLE.
 A NEWCASTLE WHEAT FIELD.

It requires no prophetic vision to foresee the time when these natural resources will build up great industrial centers, and those great centers will need food. The development of large enterprises is beyond the reach of men of limited capital; possession of a prosperous farm and consequent independence is a rational ambition. For general farming, experts regard the Escalante Valley as one of the choicest locations in the West.

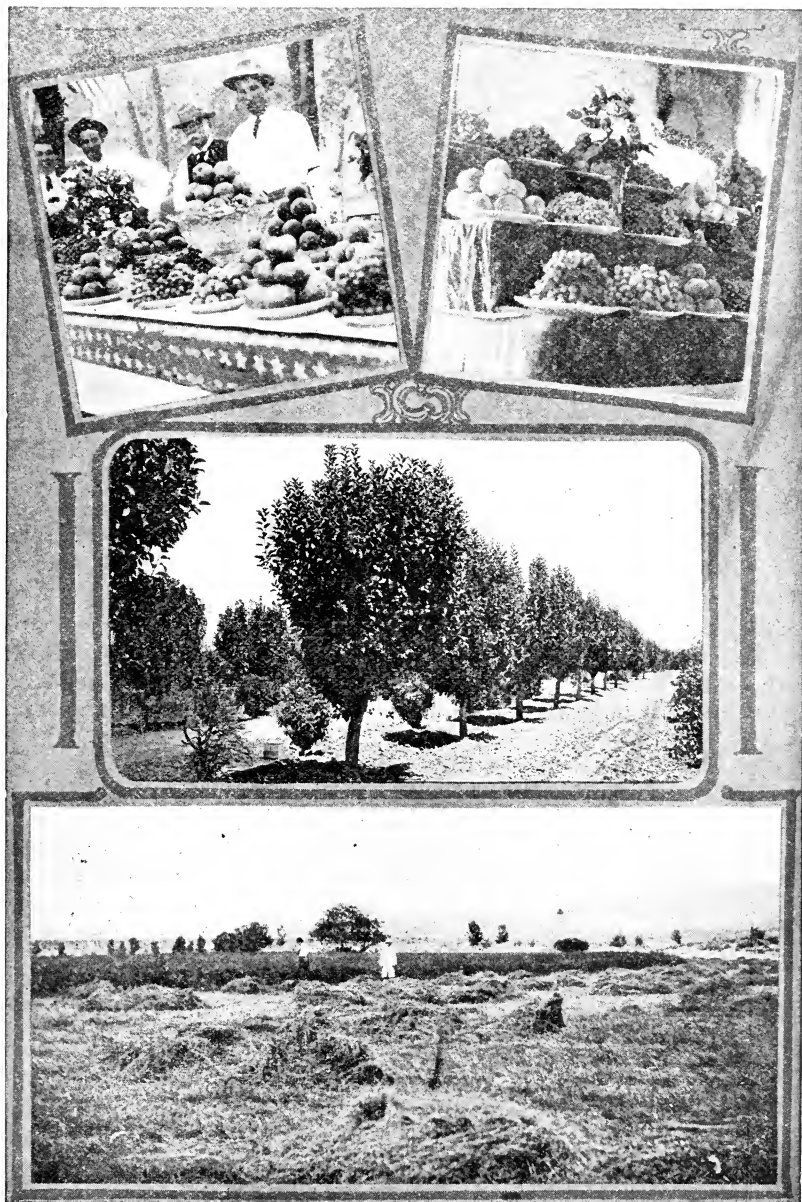
Washington County—Utah's "Dixie"

WASHINGTON COUNTY, with an area of 1,595,520 acres, had in 1912, 840,855 acres of unappropriated public lands, of which 517,948 acres were surveyed. There are two classes of lands: those lying at an altitude between 2700 and 3500 feet, characterized by semi-tropical climate and low rainfall, and those above 3500 feet. The principal towns are located between the former altitudes. At St. George, the county seat, the average annual precipitation is 8.66 inches and the mean temperature is 58.6 degrees; the average annual precipitation at Pinto in the northern part of the county, is 15.64 inches, and the mean temperature is 45.1 degrees.

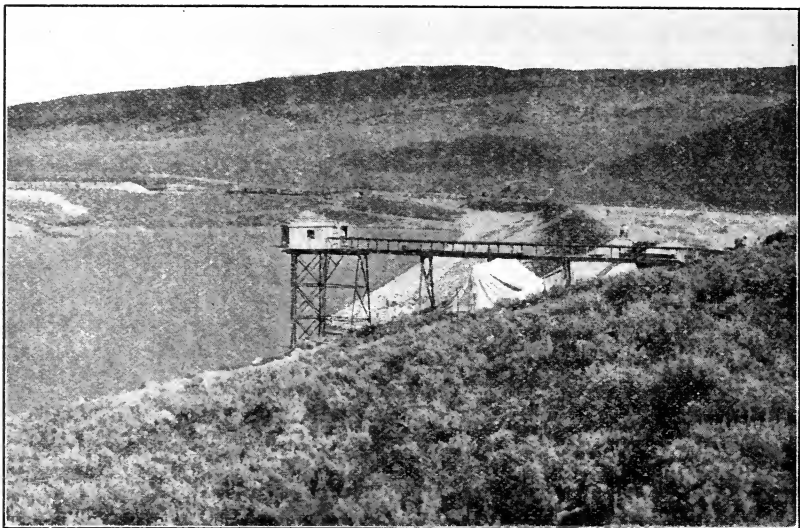
The region around St. George may be taken as typical of the lower class of lands. The soil is of decomposed sandstone, forming a sandy loam to a depth of 50 feet; the summers are long and dry, with almost uninterrupted sunshine. Cotton is grown, ginned and woven into cloth. These districts are ideal for raising fruit and vegetables: almonds, figs, walnuts, grapes, pomegranates, cabbage, lettuce, asparagus, peaches and apricots germinate and mature as if they were competing against the wide world. Indeed, many of the



HOME OF A UTAH RANCHER.



FRUITS OF WASHINGTON COUNTY, UTAH'S "DIXIE."
A YOUNG FRUIT ORCHARD, WASHINGTON COUNTY.
ALFALFA FIELD, WASHINGTON COUNTY.



GREAT DAM AND RESERVOIR, MILFORD PROJECT, UTAH.

products of "Dixie" do compete successfully against all contestants; the apricots are prize-winners and the asparagus acknowledges no superior. Elberta peaches attain remarkable size, color and flavor, and many farmers are making a specialty of that variety. During the National Irrigation Congress at Sacramento in 1907, Luther Burbank said of the "Dixie" peach exhibit: "In all my experience I have never seen such a magnificent display of peaches." The value of Washington County lands for fruit growing cannot be emphasized too strongly. While there are no large commercial orchards on account of the distance to the railway, the recent road improvement undertaken by the State should materially increase the exportation of fruit. It is estimated that grapes produce 18,000 pounds, and peaches, 30,000 pounds, per acre. During the spring of 1911 there were planted in Washington County orchards 24,000 peach trees.

The lands above 3500 feet produce grains, hardy vegetables, forage crops, apples and small fruits. Without a high state of cultivation the average soil yields 60 bushels per acre of wheat, and five crops of alfalfa are grown in a season. Under such conditions, poultry husbandry, dairying, cattle and hog raising could not fail to be profitable; the long, sunny days, pure air and excellent forage invite those pursuits. Statistics for 1910 credited Washington County with 29,483 sheep and 30,325 cattle. In 1912, 12,687 horses and cattle grazed in the Dixie National Forest, whose 460,800 acres lie within the county. It is estimated that 500 horses, 6,000 head of cattle, 20,000 sheep and 1,000,000 pounds of wool are shipped annually from this region. The shipping point is Modena, on the Salt Lake Route.

In 1910, irrigation enterprises in the county were prepared to supply water sufficient for 25,000 acres, and several new projects are now getting under way. The highest class of fruit lands will be made productive by these projects. Some of the higher lands not at present susceptible of irrigation may be successfully dry-farmed; the State maintains an experimental dry-farm at Enterprise.

The county has vast mineral resources, particularly coal; silver, lead and copper have been mined profitably; the enormous iron deposits of southern Utah extend into Washington County and there are great quantities of gypsum near La Verkin. Red and white sandstone suitable for building purposes are found in many localities. At Leeds, there is a geological curiosity, a bed of silver bearing sandstone that has no counterpart elsewhere on the globe; the reef, which has been extensively worked, contains many petrified trees, rich in silver chlorides. Near Virgin City, oil is known to exist, and future development will undoubtedly discover the oil-bearing sands. Six billion feet of timber from the Kaibab Forest, in Arizona, must eventually be sawed in Washington County and transported across her borders.

A source of future fame, as well as profit, to the county, are the marvelous canyons of the Virgin River. St. George, from which they may be reached, has all the requirements for becoming the winter resort of the inter-mountain region. Those who have seen the Grand Canyon of the Colorado, and the great gorge of the Yellowstone, need not suppose they have observed Nature at her best as painter and sculptor. The exquisite tracery of the Mukuntuweap and Parunuweap Canyons, the gorgeous ornamentation of the



A GROUP OF UTAH PORKERS

towers and temples that fringe their walls, possesses a grandeur that is literally unique. Imagine a chasm as deep as that of the Yellowstone, carved and tinted with greater elaboration, and, in places, but fifty feet wide.

Washington County, with the smiling skies and fertile soil of the semi-tropics, veined with minerals, clothed with forests and gashed by wonderful gorges, serenely awaits an enviable future.

Nevada's Agricultural Awakening

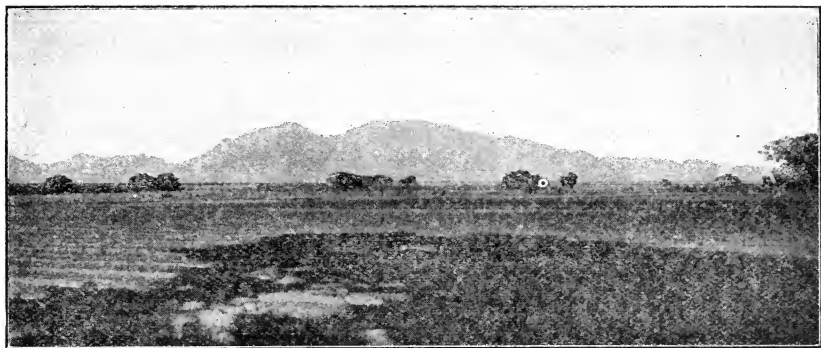
OVERSHADOWED by a series of great mining successes, the agricultural resources of Nevada have lain dormant until within the last decade. She is, however, now rapidly making up for lost time and proving by the fertility of her soils that her agricultural possibilities are barely second to those of her mines. This applies most directly to the southern counties of the state, traversed by the lines of the Salt Lake Route.

In these southern sections of Nevada exists a condition only paralleled by that of Utah, where the differences in altitude render the climatic conditions totally different from the northern sections and cause them to closely approach that of Southern California.

The principal valleys of southwestern Nevada, lying at an extremely low elevation, are possessed of a climatic condition which give to them a winter climate capable of producing the very finest of winter vegetables and all classes of fruits and nuts, save those belonging to the citrus family.



A LAS VEGAS WELL FLOWING 100 INCHES



CLARK-RONNOW RANCH, LAS VEGAS VALLEY, NEVADA.

The proximity of the specially favored sections of Nevada to her great mining camps, give to them a special advantage in the way of markets, although a great many carloads of her products find their way annually to points in the far north and also to cities east of the Rocky Mountains.

Great impetus has been given to southern Nevada's agriculture, through the discovery of new and previously unknown water supplies, the most important of which is the extensive artesian belt located in the Las Vegas Valley.

This artesian belt completely surrounds the city of Las Vegas.

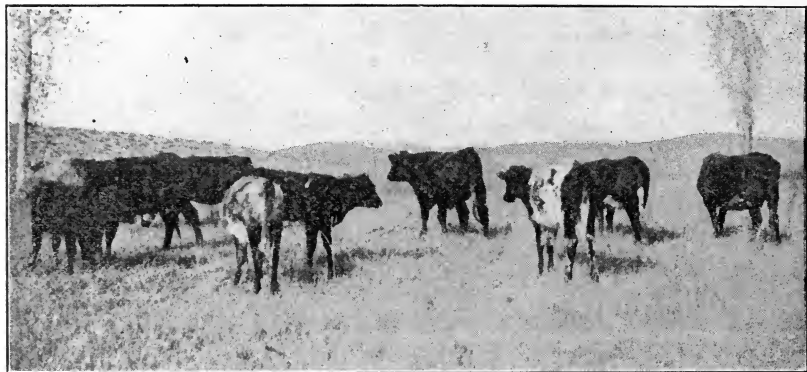
Upwards of one hundred wells have been drilled varying in flow from five to one hundred and twenty-five inches.

These water supplies are being gradually developed and the consequent extension of Nevada's productive acres is rapidly following.

Moapa Valley

MOAPA STATION, the shipping point for the products of the fertile Moapa Valley, is on the main line of the Salt Lake Route, about midway between its busy terminals, Salt Lake City and Los Angeles; the recently completed branch line to St. Thomas penetrates the heart of the region. It contains some ten thousand acres, of which perhaps half are under cultivation. The soil is a rich alluvium, whose productivity, with an annual precipitation of between 5 and 7 inches, depends largely on irrigation. In establishing the State Experiment Farm at Logan, the Nevada authorities designated that part of the State "sub-tropical." Blessed with wonderful natural advantages and excellent transportation facilities, it is rapidly becoming a community of small farms.

Alfalfa, grain, cantaloupes, vegetables and fruits are grown with remarkable success. With proper cultural methods hay yields 6 to 8 tons per acre, and grain, 40 to 60 bushels. Apples, pears and peaches from the temperate zone grow beside peanuts, sweet potatoes, cotton, tobacco, apricots, figs, pomegranates, almonds and grapes. The fame of the valley, which will undoubt-



LAS VEGAS VALLEY CATTLE.

edly become nation-wide, properly rests on its cantaloupes. There the melons acquire a flavor not to be duplicated elsewhere. After the soil has become fertilized with alfalfa, \$400.00 worth of cantaloupes per acre is not an unusual crop. Year after year the cars of the Salt Lake Route distribute these succulent delicacies in the markets of the East, and the taste of a Moapa cantaloupe is a better advertisement than a flaming signboard.

The climate of the valley is mild in winter, and in summer rather hot; the nights, however, are always pleasant. The elevation at Moapa Station is 1664 feet. It is the long, warm summers that allow six or seven cuttings of alfalfa in one year, and permit the farmer to grow a good crop of maize or sorghum after the cereals have been removed. These facts make the region ideal for fattening beef and pork; dairying, obviously, is remunerative. There are several large poultry farms and the chief difficulty of the growers is in keeping abreast of the demand.

Considerable land remains for sale at reasonable prices; there are also opportunities for renting land, either on a cash basis or on shares. There is plenty of water, plenty of markets, plenty of all the natural requirements; small farms, and consequent increase in population, are the community's needs. The speculator who lets his property stand without improvement checks the progress of his neighbors.

With its output of fruit and garden truck, fat cattle and hogs, the strategic position of this remarkable district is striking. Three hundred and eighty miles away lies Los Angeles, and further to the south, San Diego; at one or the other of these growing ports all vessels that pass their way will touch. Through the vast increase of ocean traffic to result from the opening of the Panama Canal, the inland regions will share in the prosperity of the seaboard. At no distant time the sheltered Moapa Valley, with its cloudless skies, will not have an acre of untilled land.

The Las Vegas Valley

THE LAS VEGAS VALLEY, with an area of some 700 square miles, contains upwards of 200,000 acres of arable land, not including the mesa lands along the slopes of the mountains. The elevation at Las Vegas is 2,026 feet, the rainfall averages 4 to 5 inches annually, and the summers are long and sometimes hot. The heat, however, never produces sunstroke or prostration as in the humid regions, and the nightfall invariably brings a comfortable lowering of temperature. Snow falls once in a decade. The region is essentially a healthy one, blessed with excellent water and pure air.

The characteristic soil is a sandy loam, requiring the assistance of water to display its great fertility. Successful agriculture has been practiced in the valley for years, and there is evidence that the aborigines tilled the land before the white men came.

More than anything else, the discovery of artesian water has given impetus and breadth to agricultural pursuits in the valley. The area of the artesian water, as at present defined, is about 15 miles long and from 3 to 5 miles broad, and these boundaries are continually being extended. Within the definite belt, flowing water may be reached with absolute certainty; it is impossible to predict the quantity, but, whatever the flow, it will more than compensate for the cost of tapping it. The artesian water lies at from 100 to 500 feet below the surface; while the natural springs in the mountains are cold, the flowing wells have a temperature of about 72 degrees, which fits them admirably for irrigation purposes. The geological explanation of the abundance of artesian water is that the streams to the north, as well as the accumulation from the adjacent mountains, find subterranean passage through the valley to the Colorado River. Surface water may be reached anywhere at from 10 to 70 feet,



A SHADY NOOK ON A LAS VEGAS RANCH.

and this has given rise to irrigation by pumping. Already the flowing wells in the district produce water sufficient for irrigating some 8,000 acres.

The list of crops that may be grown profitably is a long one. Barley, oats, rye and wheat do well, wheat yielding about 40 bushels per acre. Corn grows ten feet high and runs about 45 bushels per acre; this crop, together with sorghum and milo maize, may be matured after the wheat has been harvested. Potatoes produce 200 bushels per acre. All garden vegetables thrive, asparagus in particular attaining the highest quality; sweet potatoes of the best flavor yield up to 15 tons per acre. Because of their sweetness cantaloupes from the valley bring the fanciest of market prices; there is record of \$900.00 received from one acre. Casaba melons and watermelons from this region are widely known for their size and flavor. Cotton has been grown on a small scale with excellent results. Alfalfa, with six cuttings a year, yields up to 8 tons per acre.

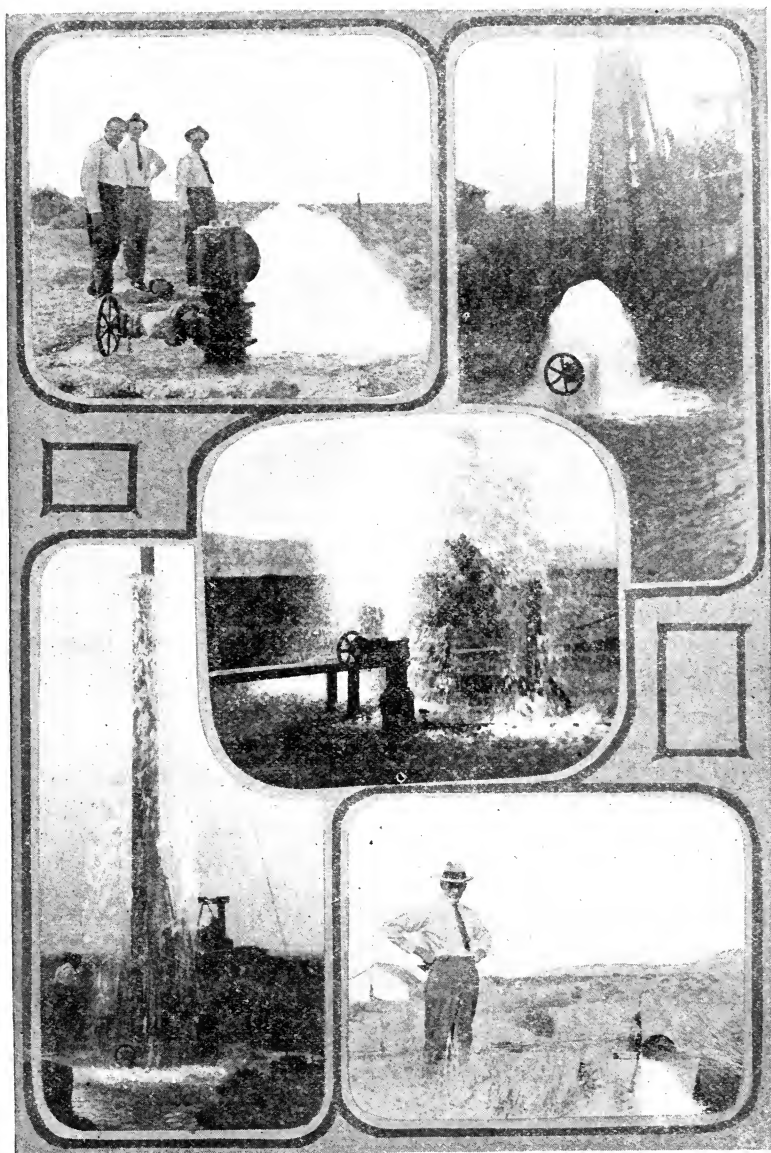
The fruit produced equals the best in any section. Peaches ripen both earlier and later in the season than elsewhere, and apples from the valley have won prizes on the Pacific Coast. Apricots, figs, pears, plums, pomegranates and nectarines are successfully cultivated; almonds, pecans and walnuts, as well as raspberries, blackberries and strawberries, add to the farmer's income. Among the grapes that have established their pre-eminence by high sugar content are Muscats and Flaming Tokays.

Dairying, poultry husbandry, and the fattening of beef and pork, are bound to prosper where there is pasturage and sunshine throughout the year, in addition to prolific forage crops. On the adjacent Moapa National Forest Reserve there is a vast stand of timber, largely fir and pine.

Mining has contributed generously to the wealth of the region surrounding Las Vegas; gold, silver, lead, zinc and copper are the metals mined profitably. Searchlight and Eldorado Canyon are heavy producers of gold, and the Good Springs District continues to lead the State in output of lead and zinc. Granite, marble, lime, salt and pottery clay are also listed among the riches of this section.

Las Vegas, the county seat and the site of the Salt Lake Route shops, is an enterprising town with all modern city conveniences. Its position on the main line of a transcontinental railway system gives it easy access to the markets of California, Utah and the East. The great size of the valley and the almost unlimited supply of artesian water opens up a large area to cultivation. There is some government land to be had and private lands may be purchased at from \$5.00 to \$100.00 per acre. As an agricultural and stockraising district the Las Vegas Valley has a most promising future.





SOME OF THE ARTESIAN WELLS IN LAS VEGAS VALLEY.

Markets

A FINE field of standing grain, an orchard groaning with ripe fruit, a pen resounding with the discord of fat hogs, or a pasture dotted with sleek, healthy cattle, are proper objects of pride to the farmer who produced them. But pride is not necessarily profitable, and the farm products were not grown for that purpose. The farmer's aim is to place them where they will excite desire in others, where the miller, commission merchant and packer may be induced to express their desires in terms of dollars. He must send his products to the markets; with the aid of the railroad, his markets become world-wide.

Other conditions being equal, however, the nearest market should be the best, and this applies particularly to livestock, the condition and appearance of which are likely to suffer from long journeys. The Los Angeles packing houses prefer to buy Utah cattle, hogs and sheep, yet they are obliged to go farther, to Idaho and Wyoming, even to Kansas, Nebraska and Oklahoma, for hogs, because the farmers of Utah are not prepared to meet their demands. This statement obtains in the face of the following facts: Alfalfa, the king of forage crops, finds in the arid soil, and in the climate of Utah, ideal conditions for growth. Wheat, barley, rye and mangel wurtzels yield generously on both dry and irrigated farms. The climate, with an almost unbroken succession of sunshiny days, makes unexcelled conditions for fattening livestock. Prior to 1905, or, more exactly, before the completion of the Salt Lake Route, the Southern California markets were not available. It has taken the stock-growers some time to perceive the opportunities thus afforded, but there is abundant evidence that they are no longer being ignored.



AN IRRIGATING DITCH, LAS VEGAS VALLEY.



BLOODED STOCK GROWN ALONG THE SALT LAKE ROUTE.

The leading sheep counties of Utah are tributary to the Salt Lake Route, Beaver, Iron, Tooele, in the order named. Utah sheep average 6 to 8 pounds of wool at each shearing; while most of the clip goes east, there are home woolen mills whose consumption is steadily growing. The knitting factories of Utah now use more than a million pounds of wool annually. Provo, the location of the largest woolen factory, and Draper, where J. R. Allen's prize-winning Cotswolds are bred, are towns on the Salt Lake Route.

Utah sugar beets may literally be sold before they are planted, the factories contracting for the entire output. The demand for Utah alfalfa seed is not limited by the confines of the United States; it is heard in foreign lands. The cantaloupes of the Moapa Valley are disposed of on the spot, to agents of eastern commission houses. Many vegetables, such as tomatoes, string beans, peas and asparagus, are purchased in advance by Utah canneries; great quantities of peaches, pears, apricots, apples and berries go to the same destination. Utah dry-farm wheat has been known to gain $2\frac{1}{2}$ per cent in weight while in transit to eastern mills. Utah celery has an enviable reputation, while Utah peaches are shipped to every State in the Union, and to Europe. A year's consumption of barley by Utah breweries exceeds \$66,000.00 in value, and more than two million bushels of wheat are ground annually in her flour and grist mills.

Poultry and eggs comprise 16.3 per cent of all the animal products in the United States; poultry husbandry is now taught in ten agricultural colleges. This industry thrives in the equable, sunny climate of Utah, and one will search long before he finds plump pullets and fresh eggs begging for purchasers.

The Traffic Department of the Salt Lake Route has voluntarily undertaken much of the marketing along its lines; this function is of considerable value, particularly to the farmer whose capital and output are small. Traffic officials continually meet buyers and sellers; through their information and agency deals are consummated quickly, while, unaided, producer and purchaser might experience delay and difficulty. The company stands ready to perform these services at all times, pointing out to the farmer where he may make a satis-

factory bargain, indicating to packer, miller or commission merchant where his requirements may be met. Transactions of this nature do not invariably bring revenue to the railroad making the suggestion; they are promoted upon the broad policy of aiding in every reasonable way the development of the resources of the inter-mountain region.

It is believed that the realignment of ocean traffic and the creation of new steamer lines to follow the opening of the Panama Canal will revolutionize the commerce of many regions. Surely none will profit more than the ports of Southern California, Los Angeles and San Diego. This stimulus will not be local, however, nor can California alone satisfy the needs thus brought into being; Nevada and Utah, if they be prepared, may also participate in the ensuing expansion of trade.

What the Salt Lake Route Is Doing for the Farmer

NOTEWORTHY among the efforts made by the Salt Lake Route to aid and encourage the farmers along its line is the annual demonstration train. The company supplies equipment and commissary, together with the services of its agricultural expert and traffic officials, while the Utah Agricultural College furnishes exhibits and lecturers.

Due notice and invitation having been sent to the persons interested, the demonstration train starts from Salt Lake City in the spring, a season at which its activities are of greatest value. Practically every station on the Salt Lake Route, as far south as Moapa, Nev., has an opportunity to inspect its contents. Stop is made at each point where an audience of sufficient size may be gathered.

Special features are sometimes emphasized. During the last tour the following topics were given marked attention: The measurement and proper use of irrigation water; dairying and silo building; the livestock industry. The exhibits comprised farm equipment, irrigation pumps and engines, weirs and other measuring devices; a model silo, with charts and photographs of dairy farms, hog houses, etc.; sanitary milk buckets, bottles and strainers; samples of nearly all feeds used in the West; a model irrigation project; exhibits of grass seeds; a car of prize hogs and cattle. Those in charge of the train distributed thousands of valuable bulletins and circulars; the lectures dealt with subjects of particular interest to the sections in which they were delivered.

Similar in aim and usefulness are the demonstration farms at various points along the Salt Lake Route. The most recent discoveries in agronomy are applied to the soil and conditions peculiar to a given tract. By careful experiment, experts determine what plants the soil will nourish best, the most advantageous time for sowing, depth to which the soil should be tilled, and methods of moisture conservation. The results are given to the community, and when a skeptic is encountered there is no argument so potent as the testimony of his own eyes.

The Salt Lake Route employs the services of an agricultural expert, Professor L. A. Merrill, whose headquarters are at Salt Lake City. His advice and counsel are open to the homeseeker as well as to the farmer already on the

land; there are neither fees nor formalities connected with the securing of his opinion. Personal interviews are solicited and letters of inquiry will be answered promptly. Bulletins dealing with problems that confront the settler are issued from time to time by the company. The Salt Lake Route has no land to sell; its interest lies in developing a region of wonderful promise, and in serving the great markets at its terminals.

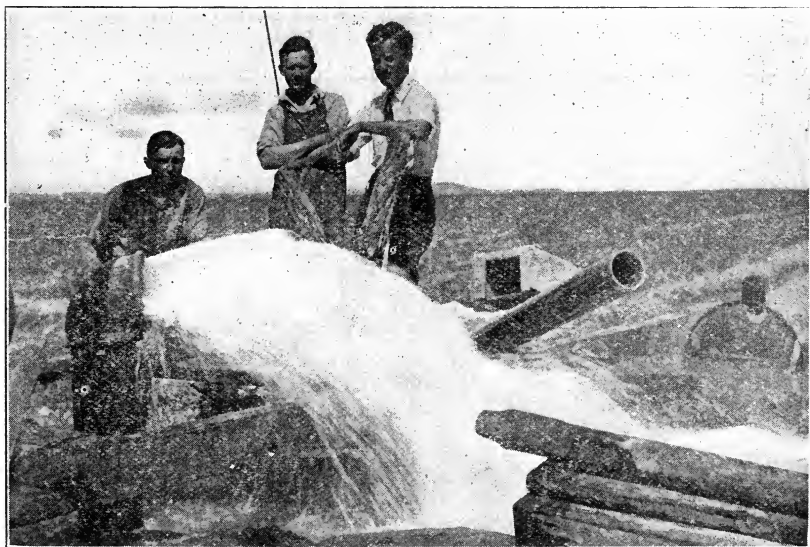
The following is a list of bulletins issued by the Industrial Department of the Salt Lake Route, copies of which may be had on application to officers of the company:

- Bulletin No. 99—Suggestions on Dry Farming.
- Bulletin No. 101—Homeseekers, Attention!
- Bulletin No. 103—How to Retain Soil Moisture.
- Bulletin No. 105—Why Grow Barley?
- Bulletin No. 107—Rational Use of Water in Irrigation.
- Bulletin No. 109—Raising and Marketing of Stock.

How Land May Be Acquired From the Government

BELOW is a brief outline of the provisions of the laws covering the acquirement of government lands in Utah.

1. The original Homestead Act, still in force, enables a qualified entryman to acquire 160 acres of unoccupied government land. The requirements are: residence upon the tract for a period of three years; cultivation of one-sixteenth of the entry, beginning with the second year, and one-eighth, beginning with the third year and continuing until period of residence is



ENORMOUS FLOW FROM A LAS VEGAS ARTESIAN WELL

completed, when title may be secured. The filing fees on an entry of this sort are \$16.00.

2. Under the Enlarged Homestead Act, a qualified entryman may appear before the officer in charge of the land office in the county selected, and file upon not more than 320 acres of arid territory that has been designated by the government as homestead land. If the homeseeker is competent to do his own locating the only expense is the filing fee of \$22.00; if he knows little of soil or conditions the services of a reputable land locator should be enlisted. The fees for locating vary from \$50.00 to \$125.00, according to size of entry, etc. After filing, residence upon the land must be taken up within six months. Beginning with the second year, one-sixteenth of the total acreage must be cultivated; beginning with, and continuing thru the third year, one-eighth of the total entry must be cultivated. The government defines cultivation as: the plowing and seeding of the land to some crop other than native grasses. During the three years of proof the entryman must not leave the land for longer than five continuous months in any one year. These conditions complied with, the entry becomes the property of the settler.

3. The above mentioned act also provides for the acquisition of not to exceed 320 acres of arid land, to which title may be obtained without residence. The locating and filing is done in the same manner as on residence land. The entryman is required to have cultivated one-eighth of his acreage beginning with the second year, and one-fourth beginning with the third year; one-fourth must be continuously cultivated until the end of the fifth year, when title may be secured, provided the entryman has personally supervised cultivation. The intent of the law is that the owner should show good faith; if it be established that he visited the farm at regular intervals and assumed responsibility for the tilling and planting, there should be no difficulty in perfecting title.



SALT LAKE ROUTE EXPERIMENTAL FARM AT NADA, UTAH.

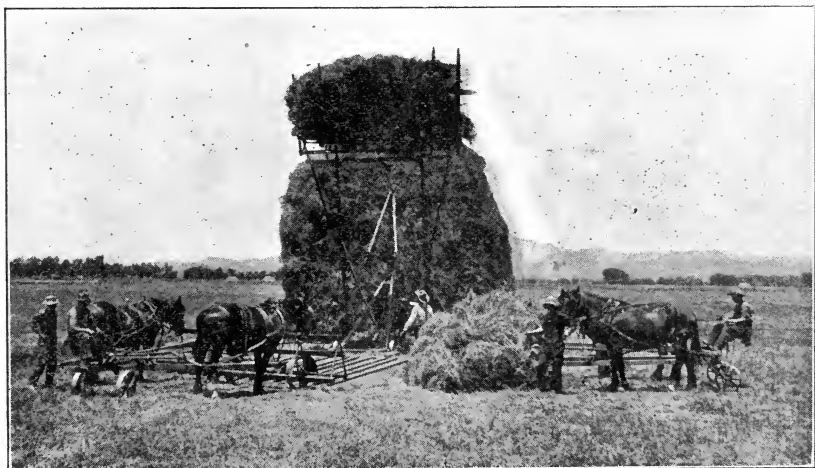
In connection with the above, it should be noted that on non-residence land, the proportion of entire entry to be cultivated is double that required when three years' residence is maintained.

4. The Carey Act enabled the Federal Government to give the semi-arid states 1,000,000 acres each, with the provision that the states cause their reclamation by irrigation and settlement. The land is sold to responsible companies under guarantee to deliver sufficient irrigation water, at prices regulated by the state. At Delta, Utah, on the line of the Salt Lake Route, some Carey Act land, with perpetual water right, remains for sale at \$50.00 per acre. These farms are sold upon the installment plan, the terms being extremely liberal.

The cost of preparing virgin soil for seed varies with location; it is estimated that \$8.00 per acre represents a high maximum for this work.

With the exception of Carey Act land, that offered by the Government must be cultivated largely by dry-farm methods. While these lands do not yield as prolifically as irrigated farms, it should be remembered that the initial cost is nominal. Prof. Widtsoe, probably the foremost authority upon this system of farming, says in favor of dry-farm wheat: "1,000,000 bushels of Utah dry-farm wheat contain as much nutritive matter as 1,025,000 bushels of wheat grown and kept under humid conditions. This difference . . . is now recognized in the prices paid." This obviously means that Utah dry-farm wheat brings a premium from millers. It is estimated by the same authority that a yield of from ten to fifteen bushels per acre will defray dry-farming expenses, that 20 bushels per acre gives a fair profit, and that 40 bushels per acre amounts to a bonanza.

Below is given a list of railroad officials, land companies, civic organizations, etc., to whom applications concerning location of lands open to entry, irrigated lands, and patented lands, may be made.



STACKING ALFALFA ON THE LINE OF THE SALT LAKE ROUTE

California, "Land of the Sun"

IT WOULD be impossible to take up more than briefly in a publication of this sort the wonders and beauties of Southern California.

Her history of development has already been written in both song and story, but it is impossible to pass entirely over this section of lands tributary to the Salt Lake Route without a few words regarding them.

The greater portion of the Southern California counties traversed by the Salt Lake Route are given over to the production of citrus fruits and other semi-tropic products. The value of the crops from these vast acreages has become phenomenal and consequently land values have advanced in proportion. There are still, however, opportunities even for the man of moderate means to take up the culture of this class of products.

Scattered throughout this entire section of California are many beautifully located small ranches which pay an excellent revenue to their owners. These are devoted to deciduous fruits, berries, winter vegetables and many other classes of products which thrive in the mild climate of the Southland. Everything is of course produced by irrigation and the resultant yield is enormous when compared with the figures given for acreage production in the Eastern states.

Poultry raising, where carried on under careful and scientific methods, is one of the most successful industries in Southern California. Prices for this class of products range high at all seasons of the year, with a market that has never been fully supplied by local production.

Outside of the great valleys given over principally to fruit culture are many tributary sections lying at elevations where there is more or less frost and in these higher sections are many large tracts of land formerly occupied by great ranches that are now being cut up into small holdings. All classes



CALIFORNIA APPLES ALONG THE SALT LAKE ROUTE



SOME WELLS ON THE MESAS OF THE MOJAVE

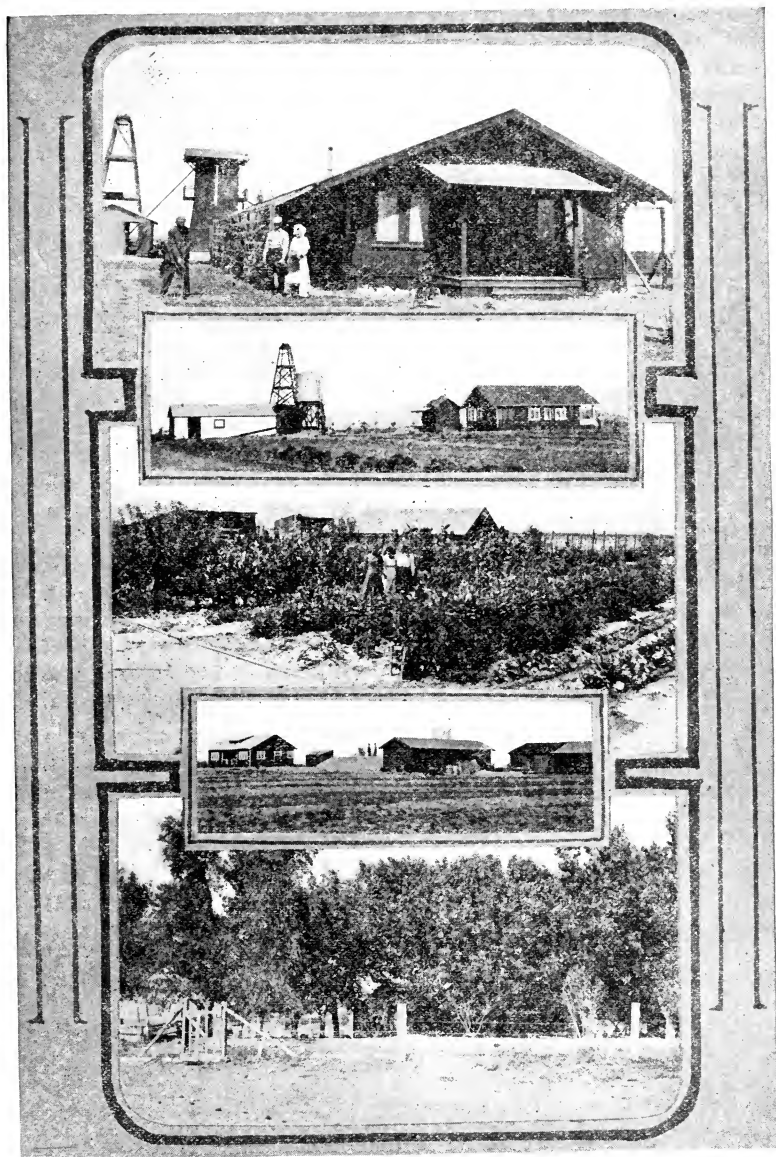
of temperate zone products thrive wonderfully in these sections and many homeseekers have gone thither to build up future prosperity in the Land of Sunshine. Climatically these higher elevations present splendid attractions and beyond the fact that they are not suitable for the production of citrus fruits, are the peers of any country in the world. In these localities large fortunes are being developed through the raising of alfalfa and the use of the same in the fattening of livestock for market, and the raising of blooded horses, cattle, sheep and hogs.

The Mesas of the Mojave

THE Cucamonga Mountains of the San Bernardino Range furnish an enormous watershed which supplies a great amount of water to the underground reservoirs of this slope and a study of the geographic conditions show that practically all of this water will be available from wells. This, together with the large water-diverting and conserving works to be put in by companies, will place practically all of the first-class land available for irrigation, which means intensive farming in all its phases, and in this connection comes the raising of winter apples which are equal to those produced in the northern and eastern states. The Gano, Winesap, Winter Sweets, Delicious, and King David varieties do extra well and are



PRIZE WINNING ORCHARD, VICTOR VALLEY



RANCH HOMES IN VICTOR VALLEY

exceptionally good keepers, many of the orchardists keeping these winter apples without proper storage facilities until apples are ripe the following season. The fact that nearly all of this country is underlaid with a clay subsoil has proven that a minimum of water only is required, thereby giving the settler the benefit of having to provide only a small supply.

Upon these northern slopes there lie nearly a half million acres of extremely fertile soil. This territory stretches from the mesas well up on the range and at an elevation of 3100 feet down across the various levels to where the Mojave River disappears among the ever shifting sands. Its whole area is approximately ninety miles in length, and through its center flows the Mojave River, which is the most permanent water supply in Southern California.

At the northern end of this area there has been some little development, with prospects that a reasonably large acreage will ultimately be developed there.

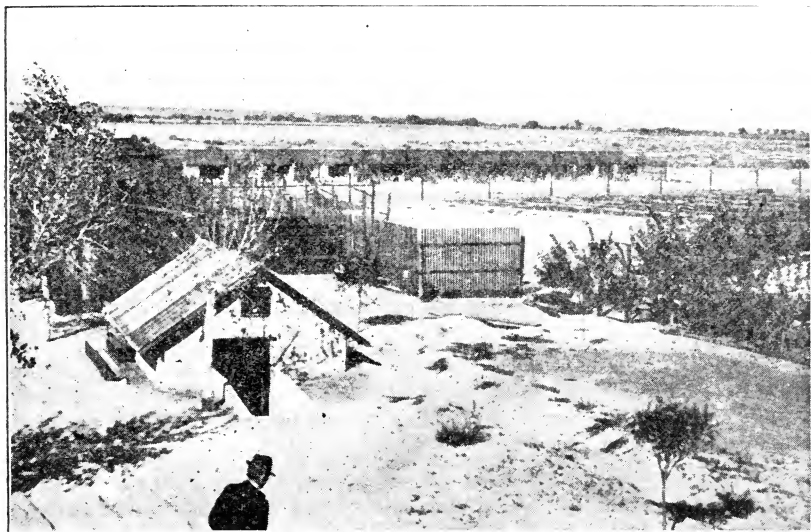
Midway and near to the Salt Lake Route Station of Harvard a few enterprising ranchers have located upon Government land and are proceeding to develop wells and bring their lands to a producing condition.

Upon either side of the Mojave River for the first forty-five miles of its course the land rises in a series of mesas, or natural terraces, each one of these various elevations being shut in by foothills, thus forming a series of exceptionally beautiful little valleys.

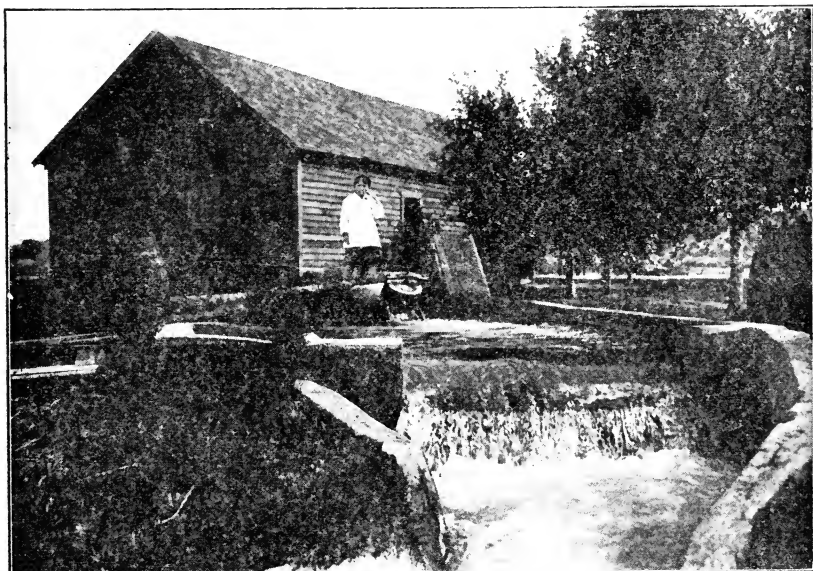
Underlying the greater portion of this territory a water plane of definite altitude has been established. The result has been that during the last three years the development of this section known as Victor Valley has been rapid and permanent. Hundreds of wells have been drilled, among which the percentage of failures has been practically nothing. The water lift in these wells varies from thirty to one hundred and eighty feet and a practical dem-



YOUNG ORCHARD IN BEARING, VICTOR VALLEY



VICTOR VALLEY POULTRY RANCH



ONE OF VICTOR VALLEY'S GREAT WELLS

onstration upon one of the highest elevations proves that water can be placed upon these Victor Valley lands at a minimum cost of \$15.00 per acre for well drilling, equipment and distribution system, with a total annual cost for delivering water to the land from not to exceed \$5.00 per acre. Upon the lower levels the original cost would be considerably less and the operating expense proportionate. In some of the sections of the Valley, close to the river bed, artesian water has been found.

With these advantages Victor Valley has attracted the attention of a great many settlers of means and the success which they have achieved in the short time their lands have been under cultivation is proof positive of what the future means for this entire section.

The soils of Victor Valley are of a decomposed granite and capable of producing anything grown in other sections of Southern California with the exception of citrus fruits. As stated in the beginning of this article, apples are at the present a crop to which the most attention has been given. In this line fruit from the Victor Valley carried off the highest honors in the State Apple Show at San Francisco, October, 1914.

Like many other sections of the Southwest, alfalfa is being extensively cultivated, while poultry raising and small fruits have also brought success to Victor Valley ranchers.

One of the chief assets of this section is its magnificent climate, which offers just enough of cold and heat so that neither becomes a burden and the minimum of humidity leaves the year filled with bright, sunshiny days, and but a few stormy ones.

There are still many excellent opportunities for the husbandman in this part of California. Relinquishments of excellent Government land within the known water area can be purchased for prices ranging from \$5.00 to \$25.00 per acre. In some of the more remote sections of the Valley it is still possible to secure good locations upon exceptionally promising Government land.



WHEAT STACKS ALONG THE SALT LAKE ROUTE



WOULD you desire information regarding train service, rates of fare, etc., to Southern California, Utah or Nevada, it will be promptly furnished upon application to any ticket agent or the following representatives of the Salt Lake Route:

M. de Brabant, General Agent, Woolworth Bldg., New York.

Geo. M. Sargent, General Agent, 808—112 W. Adams St., Chicago.

W. J. Bogert, General Agent, 819 Oliver Bldg., Pittsburgh.

E. B. Erwin, General Agent, 823 17th St., Denver, Colorado.

A. H. Heilbronner, T. F. & P. A., State Savings Bank Bldg., Butte, Montana.

J. H. Manderfield, Asst. General Freight and Passenger Agent, 10 E. 3d South St., Salt Lake City, Utah.

L. A. Casey, General Agent, 643 Market St., San Francisco.

J. H. Burtner, District Freight and Passenger Agent, Glenwood Block, Riverside, Cal.

F. H. Adams, General Agent, 601 South Spring St., Los Angeles, Cal.

Prof. L. A. Merrill, Agricultural Expert, Salt Lake City, Utah.

Douglas White, General Industrial Agent, 590 Pacific Electric Bldg., Los Angeles, Cal.

H. C. NUTT, General Manager

F. A. WANN,

General Traffic Manager
Los Angeles

T. M. SLOAN,

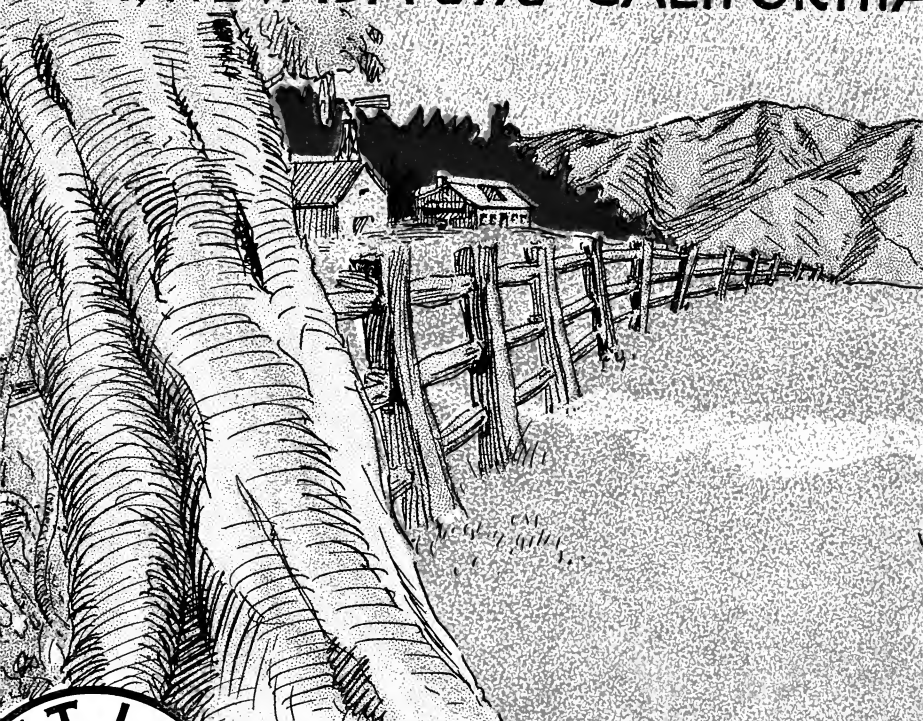
General Freight Agent
Los Angeles

T. C. PECK,

General Passenger Agent
Los Angeles

HINTS *to the* HUSBANDMAN

REGARDING OPPORTUNITIES
in
UTAH, NEVADA *and* CALIFORNIA



ALONG THE LINES
of the
SAN PEDRO
LOS ANGELES &
SALT LAKE R.R.



